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TABLE OF CONTENTS ON PAGE 2

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Vol. 34 NOVEMBER, 1948 No. 11

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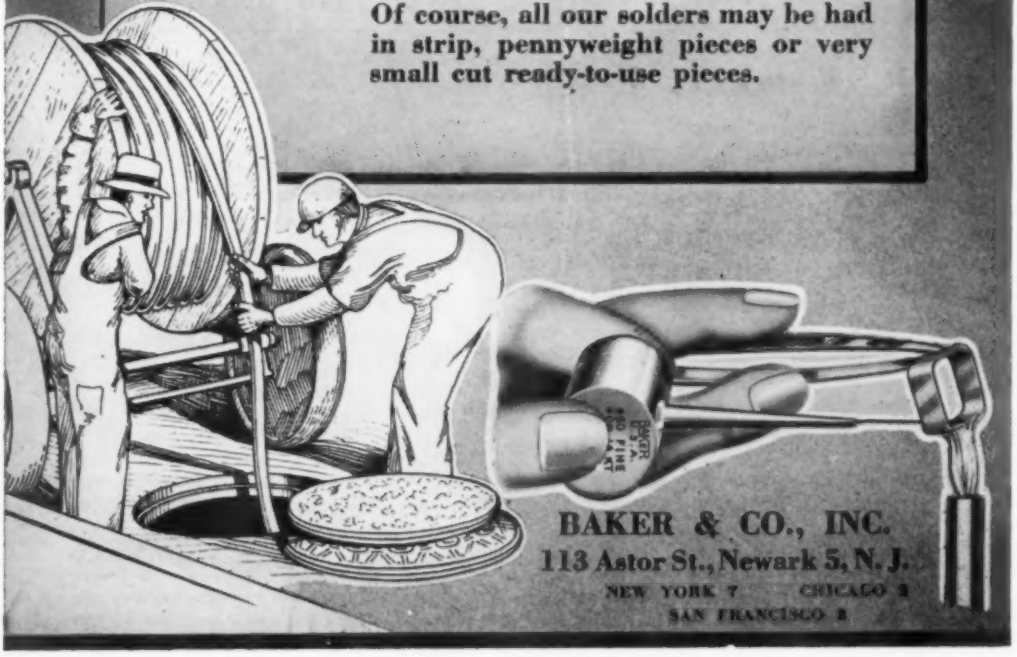

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CONTENTS FOR NOVEMBER, 1948

American Journal of Orthodontics

Original Articles

Treatment Planning and Treated Cases. Dan C. Peavy, D.D.S., San Antonio, Texas ---- 881

Retention. Raymond L. Webster, D.M.D., Providence, R. I. ---- 897

Treatment Plan and Treated Cases. William M. Jarrett, D.D.S., Charleston, W. Va. ---- 938

Editorial

Autokinesis ---- 954

In Memoriam

Albert B. Johnson ---- 956

Paul J. McKenna ---- 956

Orthodontic Abstracts and Reviews

Orthodontic Abstracts and Reviews ---- 958

News and Notes

News and Notes ---- 962

Officers of Orthodontic Societies

Officers of Orthodontic Societies ---- 968

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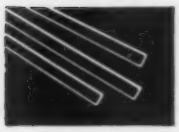

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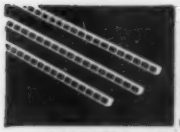

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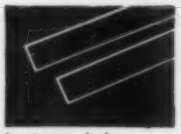

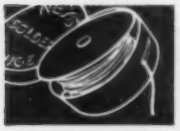

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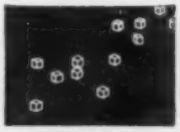

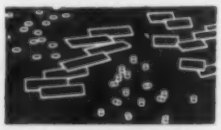

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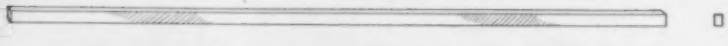

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VOL. 34 NOVEMBER, 1948 NO. 11

Original Articles

TREATMENT PLANNING AND TREATED CASES

DAN C. PEAVY, D.D.S., SAN ANTONIO, TEXAS

TREATMENT planning has its inception with the first moment of the consultation period. Here we consciously or subconsciously begin to note mentally and by record salient points that will influence our plan of treatment later when all the component parts of the case analysis are finally fitted together into one composite whole. Shall we intelligently utilize this carefully assembled data in planning our therapy for the best interests of the case at hand, or will we disregard it to follow blindly and in robot fashion some prescribed philosophy or stereotyped mechanical therapy? The answer to this rests with the individual orthodontist. If he has a thorough fundamental knowledge of the basic laws and actions of forces and how to utilize them to gain his objective, then the type of appliance becomes secondary and he is limited in what he uses only by the availability of materials with which to fabricate them. Since we are dependent upon mechanical appliances as our major therapeutic aid in the correction of malocclusions, it would behoove us to devote more time to the study of the mechanical laws and principles that control their behavior. Only then will we be able to separate the chaff from the wheat and learn to think and work with forces, levers, stresses, and strains rather than with bands, wires and attachments.

The cases about to be presented were not selected because of difficulty of treatment or fineness of result but rather to debunk the idea that each case must be treated according to some set orthodox fashion.

Since a detailed elaboration of the history, etiology, and diagnosis of the cases is not the intent of this paper, we will touch on these factors very lightly as we proceed to the treatment plans and the results attained.

Presented at the Forty-fourth Annual Meeting of the American Association of Orthodontists, Columbus, Ohio, April 29, 1948.

NO. 230 AGE 12 yrs. 2 mo.

NAME CASE NO. I

DATE 2-11-39

6½ | 8 | 8 | 6½

SUM = 28.5

PONT = 4|4 = 35.5
6|6 = 44.5

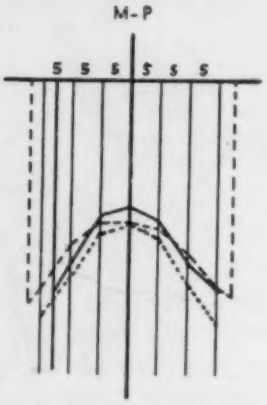
FORM I
(12 yr. group)

16⁴ | 14 = -5.5

20.5⁶ | 20.0 = -5

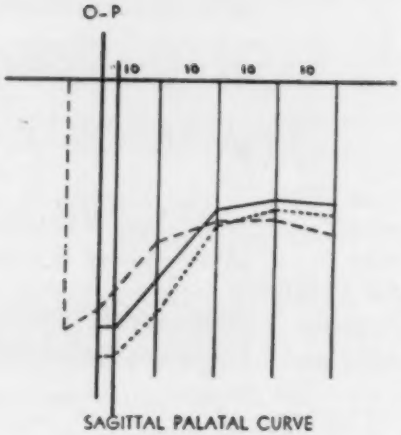
18.5 | 19.0
6 | 6 = -7

15 | 14.5
4 | 4 = -6

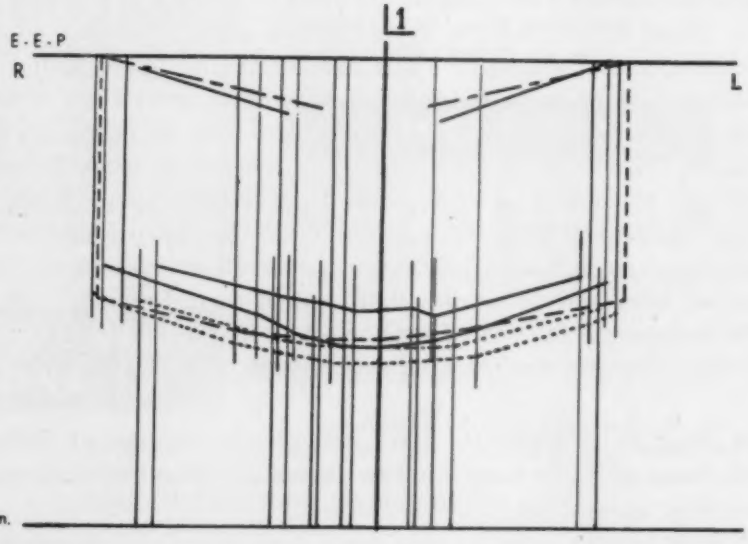


TRANSVERSE PALATAL CURVE

E-E-P



SAGITTAL PALATAL CURVE



10 cm. ____

Fig. 1

OCCLUSAL CURVE

CASE REPORTS

CASE 1.—Girl, white, aged 12 years, 2 months. She was a full-term, breast-fed baby. She had the usual childhood diseases. Her tonsils were removed at the age of 11. Her general health was good, and she was physically active and well developed. Fig. 1 shows the gnathostatic chart of the case. Fig. 2 shows the pretreatment x-rays and Fig. 3, *A*, the photostatic picture. Diagnosis revealed a distoclusion with dental contraction and crowded and rotated anterior teeth; deep bite with tissue contact; retained upper left deciduous cuspid and

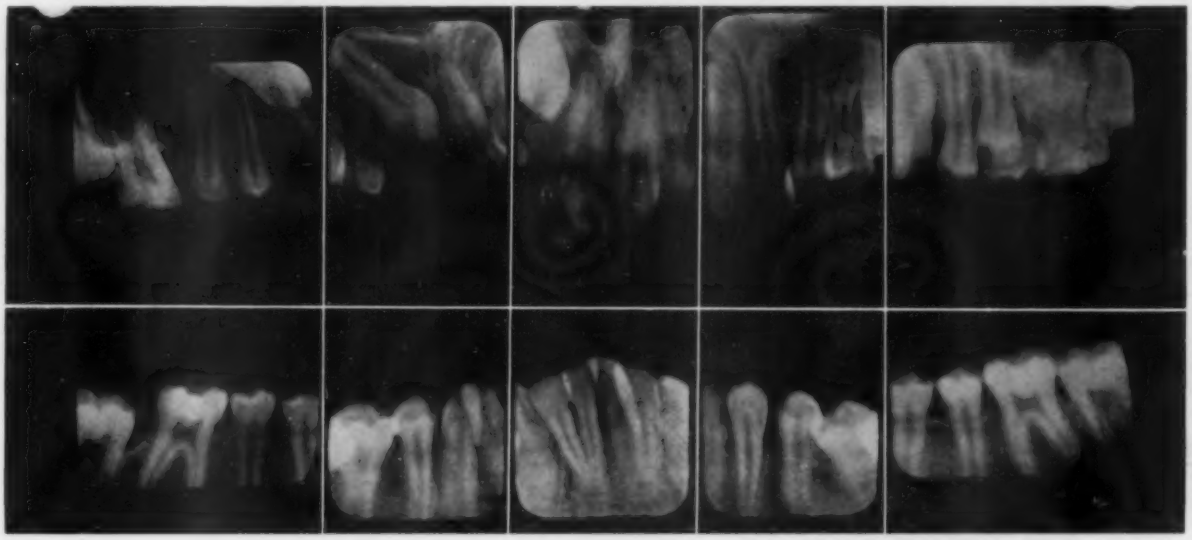


Fig. 2.

A *B*

Fig. 3.

right second deciduous molar; labially impacted upper left permanent cuspid, the crown of which was wedged tightly in the embrasure between the lateral and central incisors. X-rays further revealed trauma of the lower anteriors with loss of the supporting bone. Fig. 4, *A*, *B*, *C*, *D*, and *E* are gnathostatic models of the case at the time treatment was started.

Treatment.—The general plan of treatment was to extract the remaining deciduous teeth, symmetrically expand the arches, open the bite, correct the

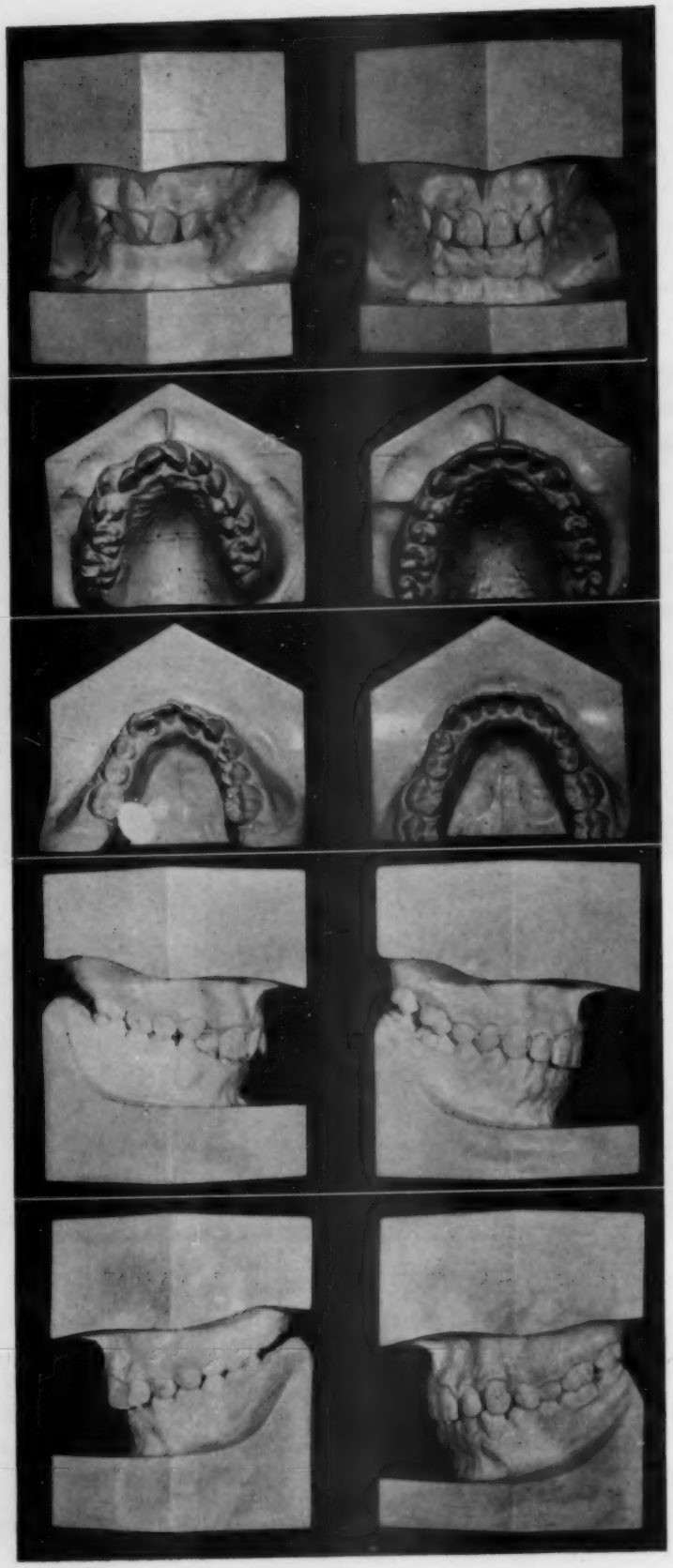
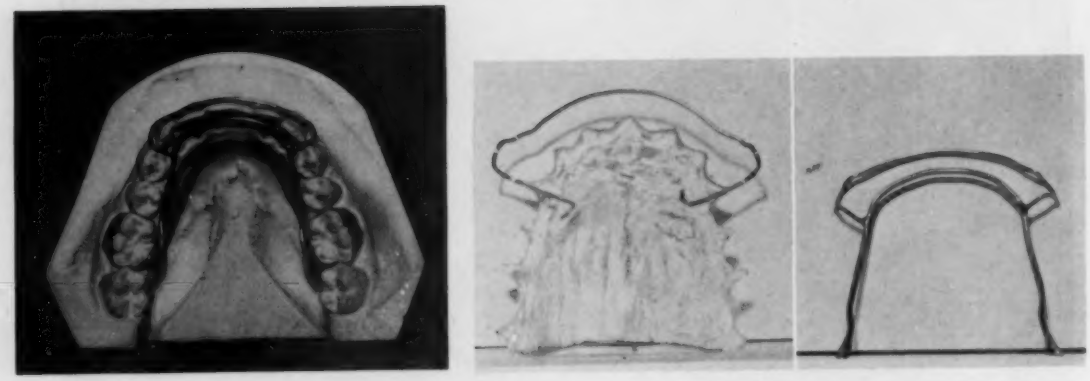


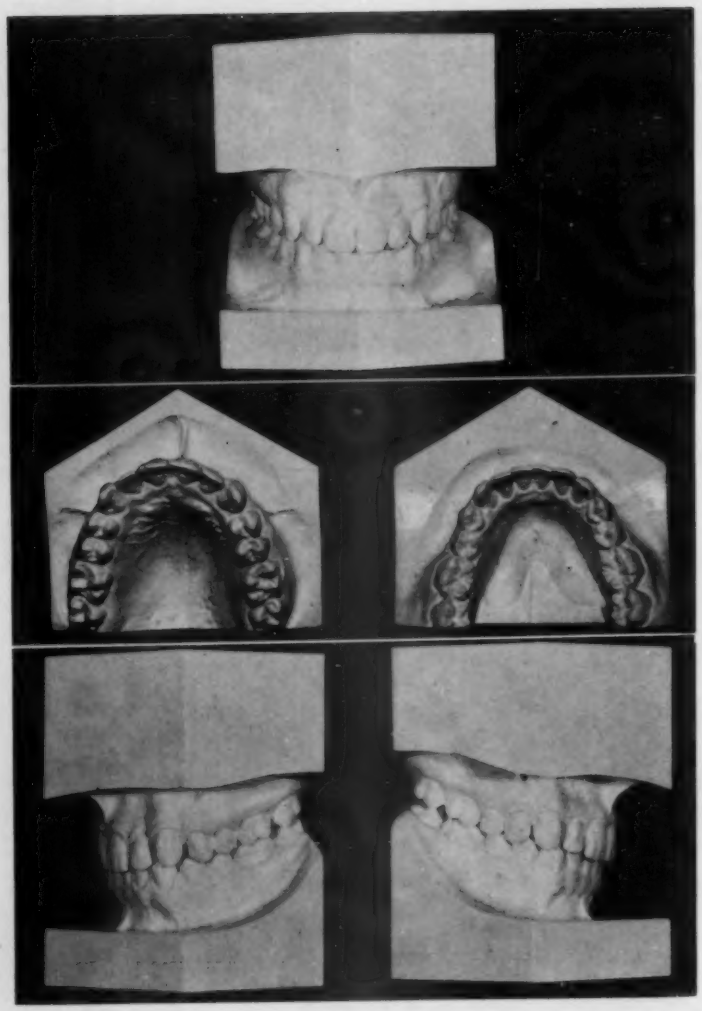
Fig. 4.

Fig. 5.



A. B. C.

Fig. 6.



A. B. C. D. E.

Fig. 7.

Fig. 8.

jaw relation, place the individual teeth in proper alignment, and move the impacted cuspid into its proper position.

Appliances used: First molars banded; 0.036 gold lingual arches added and symmetrical lateral expansion started with 0.020 gold finger springs; deciduous upper right second molar and deciduous upper left cuspid extracted; upper central and lateral incisors banded with Angle edgewise brackets; upper 0.022 inch labial arch, stepped up to 0.036 inch distal to the cuspids and with 0.022 inch loop stops, anterior to 0.036 inch buccal tubes. A 0.025 inch basket guard was soldered over the impacted cuspid area with a 0.020 inch finger spring soldered from the guard. Flap operation to expose impacted cuspid, the crown of which was labial to the arch, and tightly wedged in the embrasure between the left central and lateral incisors, in contact with the root surfaces of both. This precluded the possibility of banding or capping the cuspid, so a tiny hole was drilled partially through the enamel on the labial surface, near the tip of the cusp and distal to the ridge. A small threaded eyelet was cemented to place, and a 0.008 inch chrome wire was laced through the eyelet and the tissue of the flap at a point that would be directly over the eyelet when the flap was sutured in place. The ends of the chrome ligature were tied passively to the labial arch until healing took place. The ends were then attached to the finger spring, which was adjusted to lift the crown of the cuspid labially from the embrasure before starting distal movement to avoid injury to the root of the lateral incisor. Direction of force being applied to the cuspid was altered as needed to accomplish labial, then distal, movement. The cuspid erupted through the gum tissue at about the point where a high cuspid would erupt. No lower labial arch was used until now. At this point the lower anteriors and upper left cuspid were banded with Angle edgewise brackets, and upper and lower twin wire arches were added, using 0.022 inch gold loop stops anterior to buccal tubes, upper and lower. The upper left cuspid was first ligated to the arch to approximate bracket alignment. Then one wire was placed in bracket and finally both. The lower twin arch rested well below the brackets before snapping into place. The twin wire hookup was used to finish the case. Figs. 5 and 3, *B* show the posttreatment x-rays and photostatic picture. Fig. 6, *A*, *B*, and *C* show the retainers used, and Fig. 4, *F*, *G*, *H*, *I*, and *J*, the models of the case made when the appliances were removed. Fig. 7, *A*, *B*, *C*, *D*, and *E* are models of the case made three and one-half years following treatment, and Fig. 8 shows x-rays made at the same time.

Case 2.—Girl, white, aged 16 years, 1 month. She had usual childhood diseases and was robust, healthy, and somewhat overweight. She had no contributing habits. Fig. 9, the gnathostatic chart, shows the orbital plane passing just distal to the cusps of the first premolars. Fig. 10 is the pretreatment x-rays which revealed extensive caries which had to be corrected before treatment was started. Fig. 11 is a copy of a pretreatment snapshot furnished by the patient. Fig. 12, *A*, *B*, *C*, *D*, and *E* show the gnathostatic models of the case at the time treatment was started.

Treatment.—The general plan was to reduce the tooth structure to permit correction of the protractions and the placing of the teeth upright upon basal bone and to improve dental and facial harmony and esthetics.

FORM F
(18 yr. group)

NO. 252 AGE 16 years, 1 month.

NAME CASE NO. 2

DATE 3-8-43

7	9	9	7

SUM = 32

PONT = 4 | 4 = 40
6 | 6 = 50

18 | 4 4 | 17.5 = -4.5

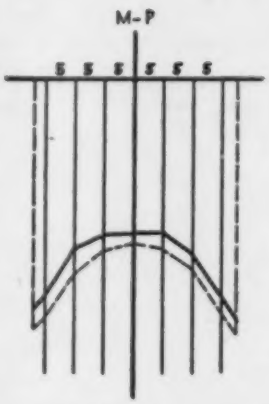
22.5 | 6 6 | 22.5 = -5

20 | 20

6 | 6 = -10

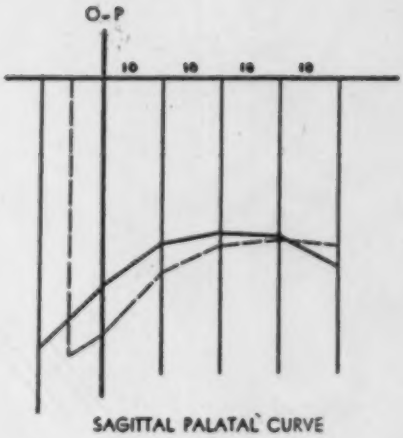
17 | 17.5

4 | 4 = -5.5



TRANSVERSE PALATAL CURVE

E-E-P



SAGITTAL PALATAL CURVE

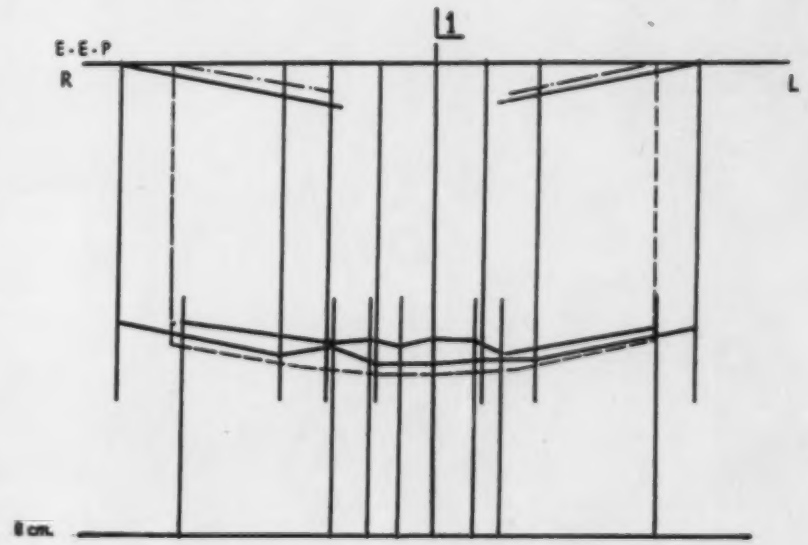


Fig. 9

10 cm.

OCCLUSAL CURVE

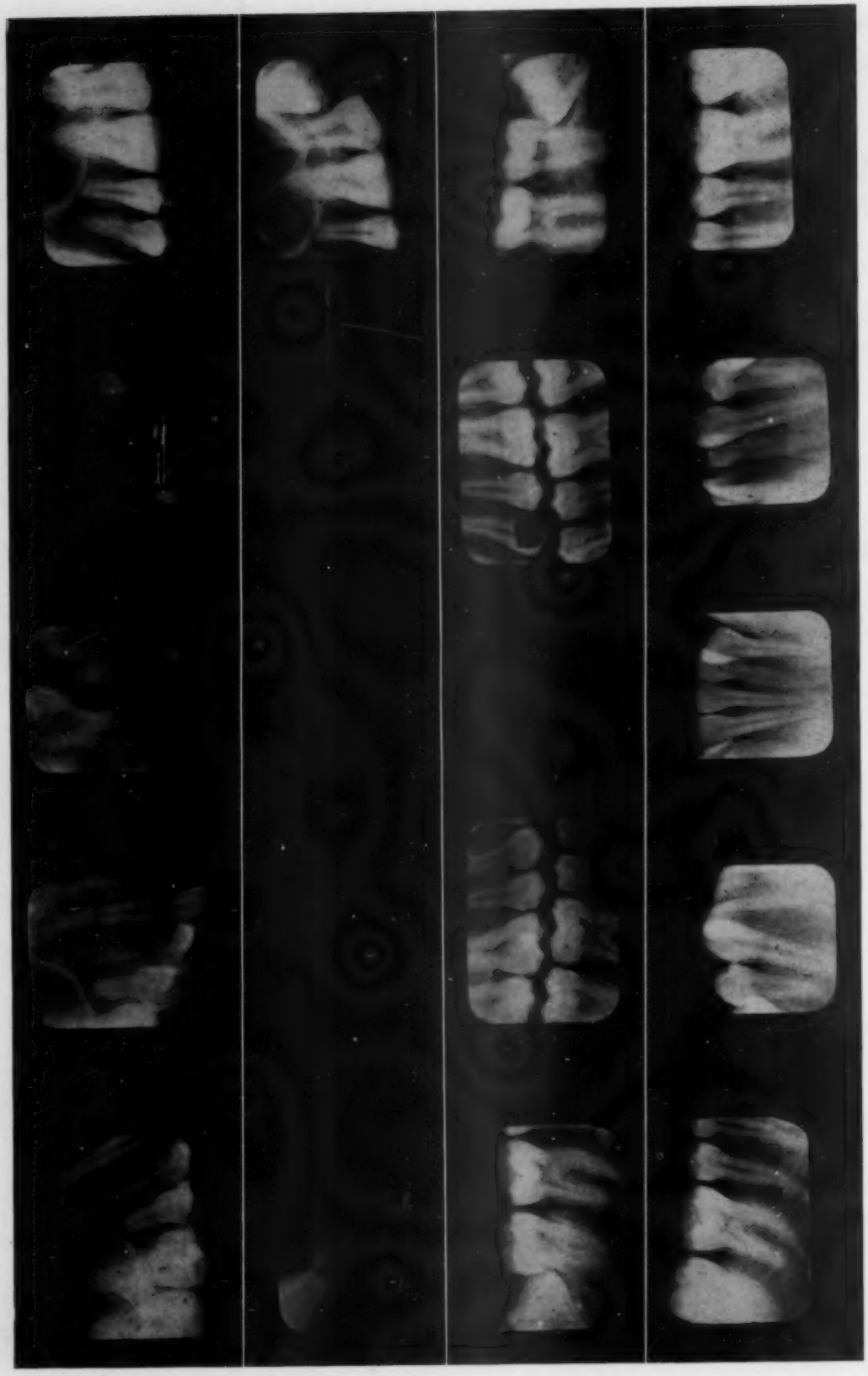


Fig. 10.

Appliances used: Gold bands were made for the first molars, carrying lingual tubes and 0.036 inch buccal tubes. Lingual arches were fitted tightly against the lingual of the incisors, care being exercised to see that their shape did not encroach upon the path the cuspids were to follow. The incisors and cuspids were banded with Angle edgewise brackets and alignment staples. Round steel arches, 0.020 inch, ending in 0.036 inch outside diameter end sheaths were shaped and fitted to the brackets and buccal tubes. As the arch passed distal to the cuspids it was shaped to the path the cuspid was to follow.

Fig. 11.

Loop stops were placed and tied back to the buccal tubes. Thus, we had established a scaffolding or framework for anchorage to pit against the distal movement of the cuspids. The cuspids were then moved distally, upper and lower at the same time, by sliding them along the predetermined track like beads on a string. The force used for this was silk ligatures. When the cuspids were in contact with the second premolars, they were tied back with wire ligatures from the distal alignment staples to the buccal tubes of the first molars. The lingual arches were remade to allow for distal movement of the incisors and also to in-

Fig. 12.

Fig. 13.

A. *B.*

Fig. 14.

A. *B.* *C.* *D.* *E.*

Fig. 15.

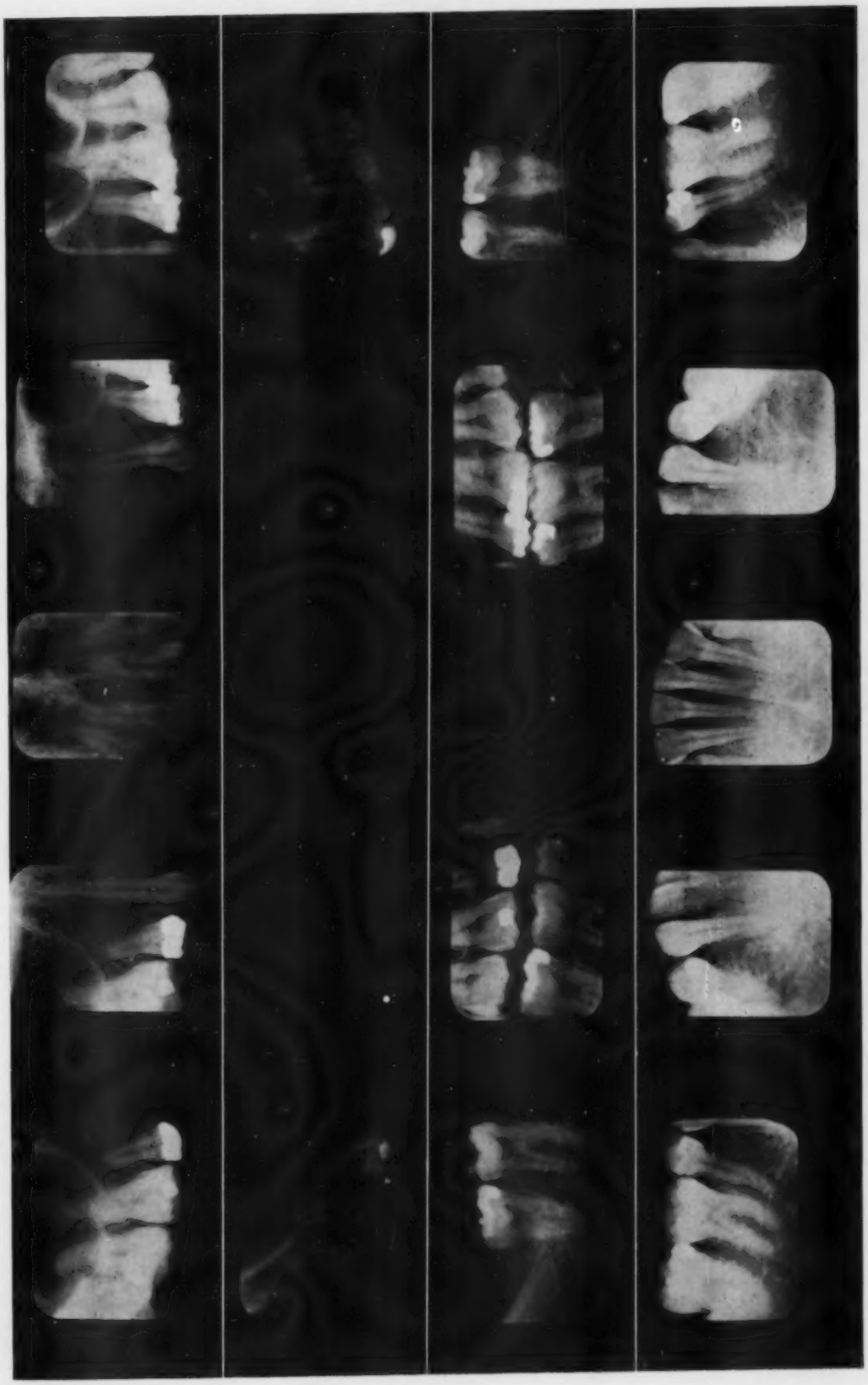


FIG. 16.

corporate the cuspids in the anchorage. Twin arches were substituted for the 0.020 inch arches, and loop stops placed on the end sheaths and tied back. By compressing the loop stops, the upper and lower incisors were brought back with a pulling and hugging action that automatically produced the desired arch form at the same time. All anterior bands were then removed and the twin arches ligated to the anterior teeth and tied back with loop stops. These were worn for a few days to close the spaces between the teeth occupied by the bands. The remainder of the appliances were then removed and retainers placed. Retainers of the type described in Case 1 were placed. The patient was advised to have the lower third molars removed. Time of active treatment was fourteen months. Fig. 12, *F*, *G*, *H*, *I*, and *J* show models made at the end of active treatment. Fig. 13 shows the x-rays, and Fig. 14, *A* and *B*, the photostatic pictures made at the same time. Fig. 15, *A*, *B*, *C*, *D*, and *E* are models, and Fig. 16, x-rays made three and one-half years following active treatment.

745 Milam Building.

RETENTION

RAYMOND L. WEBSTER, D.M.D., PROVIDENCE, R. I.

OF ALL the problems involved in orthodontic treatment, none seems to be fraught with more uncertainties than that of retention. Those of you who have not had the experience have only to review the literature over the past ten years to have this fact brought forcibly to mind.

So much more in proportion has been written about the advances made in active treatment in orthodontics than in retention that it would seem that its many uncertainties have been the reason that writers have shied away from this subject. It might be well for a moment to review a few quotations showing us how strongly past writers have felt on this matter.

Calvin Case[1] in his textbook, *Dental Orthopedics*, back in 1921 said: "It is possible, even probable, that the art of retention will never approach so nearly to an exact science as that of regulating, because of certain natural influences over which one can have little or no control."

Harold Chapman[2] of London wrote: "The value and the method of treatment are judged by the percentage of cases treated successfully. The criterion of success is not the placing of the teeth in so-called normal occlusion, but their retention in those positions without any artificial aid."

Oppenheim[3] said: "As we do not know anything about the amount required and the time necessary for the reparative processes, which are quite different in different individuals, we can in no case of finished treatment say whether there will be a permanent success or whether a relapse is to be expected."

Hahn,[4] in a paper entitled "Retention—the Stepchild of Orthodontia," said: "Irrespective of the length of time a tooth is held in its new position by any means whatsoever, it will upon release seek a position where it is in balance with the forces that act upon the denture. Whether these forces are for good or evil is immaterial, the greatest of these forces is the force of occlusion."

Mershon's[5] oft quoted statement is "you can move teeth where you think they belong, nature will move them where they will best adapt themselves to the rest of the organism."

Hellman[6] stated: "A complete result must be accomplished before retention is applied. A long period of observation should follow removal of all appliances, especially until the active developmental periods have been completed, to ascertain ultimately the final results of treatment. This long period of postoperative observation will determine in the operator's opinion what he has or has not accomplished."

Presented at the Forty-fourth Annual Meeting of the American Association of Orthodontists, Columbus, Ohio, April 29, 1948.

Now few of these quotations were made within the last few years, and the treatment therapy in their time may in some measure have been responsible for the feelings of the writers. We must ever be realistic, but during the past three days we have seen the advances which are being made, and while it still may be too soon to draw definite conclusions, I feel that we can allow ourselves considerable optimism on the question of retention.

The purpose of this paper will be to consider principles of practice and office procedure which in our hands have proved to be most sound in giving promise of good retention, and by good retention I mean the existing conditions long after all appliances, both retentive as well as active, have been removed. Considered from this viewpoint, most satisfactory retention might come in some instances from early treatment, other times from treatment of the mixed dentition, and then again only following treatment of the permanent dentition.

Likewise, during these different periods of dental development, there are certain indications to look for which give little or no promise of a favorable retention prognosis, and I shall endeavor to cover these also.

While the subject of retention naturally is placed last in sequence on the program of this meeting, its consideration in the orthodontist's office does not await the termination of active treatment of the case in hand. The experienced orthodontist includes the problem of retention in the study and planning of his case before any active treatment is instituted. What he does in active treatment and how and when he does it will influence, so far as it is within his control, the degree of success in the permanence of his results, the retention. The following, therefore, are questions relative to retention which should be considered at the time of case analysis and will be taken up according to the time in dental development that the patient is first seen.

PATIENTS PRESENTING WITH DECIDUOUS DENTITIONS

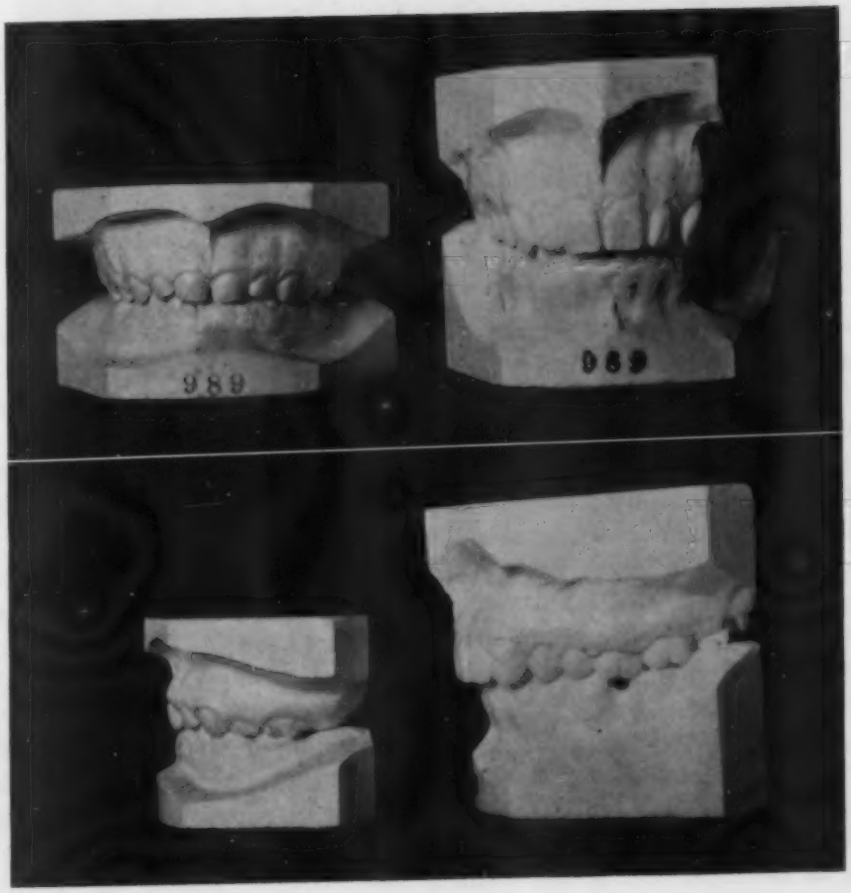
1. Etiology—If the cause of a condition which is getting progressively worse can be determined and corrected at an early age, does it not give better assurance of a favorable retention prognosis than later? It may be just the faulty locking of the deciduous anterior teeth that could be corrected with no appliances.

Fig. 1, *A* and *B* (Constance R.) show the case of a child first seen at age 3, presenting a faulty labiolingual relationship of the deciduous anterior teeth, the correction of which was brought about by the parents' exerting daily pressure upon the palatal side of the maxillary anterior teeth. This correction was brought about in six months and needed no mechanical retention. The patient has had no treatment since, and Fig. 2, *A* and *B* show the case now seventeen years later, along with models of the case as originally corrected. It is true that this correction could probably have been brought about many years later with mechanical aid, but by restoring the functional relationship of the teeth at this time, growth and development were allowed to proceed to the permanent benefit of the patient.

A.

B.

Fig. 1.



A.

B.

Fig. 2.

2. Appliance Therapy.—In considering appliance therapy at this age, is it not logical to assume that the less we have to do the better are the chances of good retention, barring certain changes that may take place which may be detrimental to the future welfare of the case? Again, when I say good retention, I am not thinking of it in terms of mechanical, but of natural retention.

Fig. 3 (Linda S.) shows the case of a child, also aged 3, who had a faulty labiolingual relationship of the deciduous anterior teeth, similar to the previous case, but with a marked Class III tendency which, in my opinion, would have become progressively more prominent if corrective measures were not taken at that time. Mechanical therapy was resorted to, and the condition was corrected in three months' time (shown on the left). The maxillary appliance was left on as a retainer for nine months, and no further retention or active treatment has ever been necessary. The model at the right shows the condition as it is today, six years later.

Fig. 3.

Surely if a long period of mechanical retention had to follow treatment at this age of the child, with all of its attendant hazards of breakage or its possible interference with future growth, early treatment would have very little to offer.

The teachings of Alfred P. Rogers in myofunctional therapy, combined with light appliance stimulation, should be most thoroughly studied by the younger men and reviewed by the older men. May I repeat Rogers's[7] statement of long ago, in which he said, "The student will learn that development brought about by increased function calls for less retentive apparatus than development brought about by mechanical means alone." Because these teachings are not followed is to my mind the reason for much of the condemnation of early treatment. In deciduous arch treatment, the minimum amount of active appliances and the most gradual tooth movement necessary to remove interference, thereby allowing the dental arches to be placed in correct functional relationship while the normal muscular development of the surrounding structures is brought about, are the reason for the success of Dr. Rogers in the retention of the treated cases, both deciduous and permanent.

Long after Rogers's introduction of myofunctional therapy for the younger patients, research men showed that growth of the jaws anterior to the first permanent molars was completed at 5 to 7 years of age and could not thereafter be stimulated to renewed activity.

PATIENTS PRESENTING WITH MIXED DENTITIONS

1. Classification.—While there is considerable controversy about the benefit to be derived from mixed denture treatment, it has been our experience in Angle Class I cases that the teachings of Dr. Hayes Nance[8] are most valuable, and I would commend his writings to your attention. As prognosis of retention in these cases is very questionable, where an increase in arch width has been mechanically brought about, active treatment at this age is seldom indicated in this classification. In Class II cases we have found retention prognosis to be most favorable, with secondary treatment greatly reduced, if necessary at all.

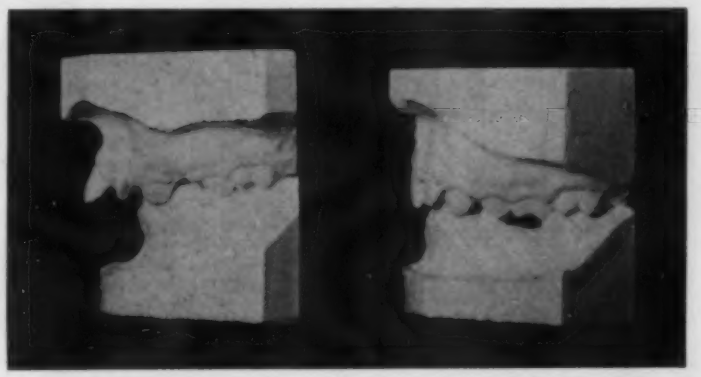


Fig. 4.

Bercu Fischer,[9] in his paper entitled "Retention," said he felt that in Class II, Division 1 cases the improved facial balance that results from early treatment, even in those cases showing dental relapse and requiring a secondary period of treatment, would indicate that early treatment is desirable. With this I am in happy accord, so much so that I am showing four cases to substantiate my convictions. (In making up these slides, I have the models or photographs progress from left to right in treatment, or retention, and after retention period.)

Fig. 4 (Arthur C.) shows a case of a boy, aged 6 years, 6 months, with a Class II malocclusion. The length of treatment was one and one-half years; the retention was one and one-half years. Fig. 5, *A* shows the case at that time, and Fig. 5, *B* shows the case with an upper acrylic retaining plate with inclined plane, during which time the masseter-temporal exercises were carried out. Fig. 6 shows this case, along with the original condition, three years after mechanical retention was discontinued. Fig. 7, *A* and *B* show the original photographs along with those as he looks today.

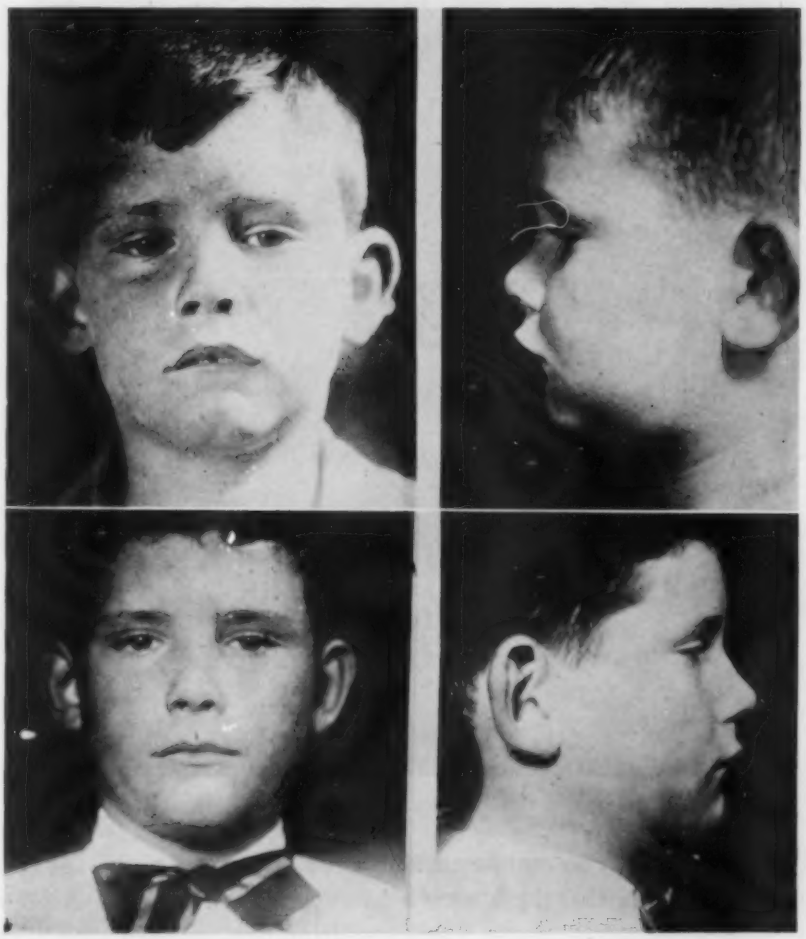
Fig. 5, *A*.

Fig. 5, *B*.

Fig. 6.

Fig. 8 (Chip P.) is a similar case of a boy, aged 7, but following a period of one and one-half years of active treatment *no* mechanical retention was, or has been, necessary. Fig. 9 shows this case four years later, along with original model. Fig. 10, *A* and *B* show oral photographs as the case is today. Fig. 11, *A* and *B* show the original and present-day photographs. It has been by observation that when retention, as well as treatment, was satisfactory in one child of a family, the same could usually be expected in other children coming along for treatment in that family. It may be that the balance of forces which have been inherited is the explanation of this, and it is certainly gratifying to treat large families of such parents.

A.



B.

Fig. 7.

Fig. 12, *A* and *B* (Ann P.) show the sister of the former patient who was treated at the age of 8. This patient required only a year of active treatment but two years of retention, with an upper acrylic plate with inclined plane to be worn during the period of muscular development. Fig. 13, *A*, *B*, and *C*

show the original models along with the case as it is today, six years later. Fig. 14, *A* shows photographs at beginning of treatment, *B*, at completion of treatment, and *C*, at the present time, six years later.

Fig. 8.

Fig. 9.

Fig. 15 (Tertius B.) shows the case of a boy 7 years of age with apparently a similar condition to the three previous cases. One and one-half years of treatment were necessary to correct this condition, but a much longer period of mechanical retention seemed indicated while awaiting the full eruption of the premolars and canines, for he wore an upper plate with inclined plane for four years. Fig. 16 shows this case four years later with a very satisfactory retention, the patient now being 16 years of age. Fig. 17, *A* and *B* show original photographs and those as he is today, four years after all retention was discontinued.

It is my feeling that less extraction might have to be resorted to in many cases of this classification in the permanent dentition if they were treated during the time of their mixed dentition when the faulty relationship of the dentures could be restored, along with normal facial muscular balance.

A.

B.

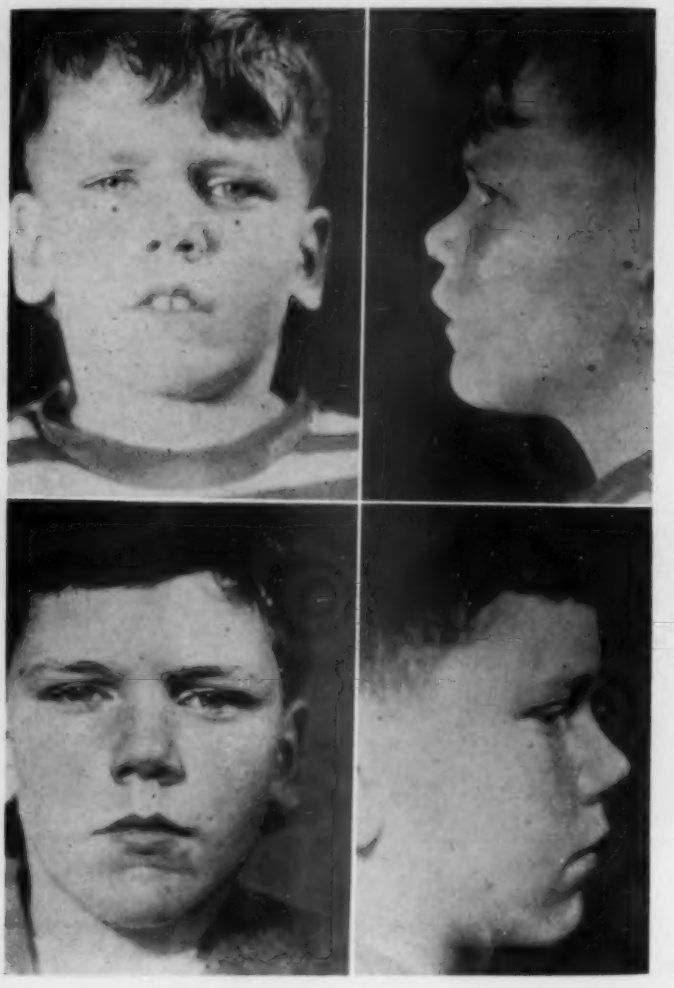
Fig. 10.

Mechanical retention, of course, is necessary, as I have noted, following active treatment in mixed dentitions, the length of which varies and the type of which is dependent upon many things. If the child is conscientious and cooperative, an acrylic plate with an inclined plane on the maxillary arch and the lingual arch remaining on the mandibular second deciduous molars is most efficient. Masseter-temporal exercises are to be carried out morning and night in conjunction with these retaining appliances, which are sometimes worn until the deciduous buccal teeth are replaced by their permanent successors, and until the second molars are fully erupted. This point is very important, for we have found that if mechanical retention is discontinued before the maxillary twelve-

year molars have fully erupted in Class II cases, we have sometimes lost the corrected mesiodistal relationship of the arches.

Now in children who are not cooperative and would lose or break retaining plates, a heavy labial wire worn on the maxillary arch at night with light intra- or intermaxillary elastics and a removable lingual on the lower second deciduous molars has proved more effective. There is, of course, the danger of the wire being bent upon insertion or removal by the patient, but, strange

A.



B.

Fig. 11.

as it may seem, the most obstreperous youngsters, when given the responsibility of placing this wire themselves, plus the fact that it can be left off during the daytime when they are most active, appeals to them and they do a very good job with it and, incidentally, it appeals to their parents, who would be driven to distraction if retaining plates had to be contended with.

In Class III cases, the corrected relationship of the anterior teeth should be maintained by retainers, if necessary, until the permanent buccal teeth have fully erupted and lock in their correct mesiodistal relationships, and if there are strong hereditary tendencies or detrimental inherent growth forces, mechanical retention may be necessary for a long time. Here, again, myofunctional therapy plays a very important part in retention, and masseter-temporal muscles should be strengthened through exercises to help maintain the correct relationships of the teeth.

A.

B.

Fig. 12.

PATIENTS PRESENTING WITH PERMANENT DENTITIONS

1. *Stability*—It is now a recognized fact that if the stability of a dentition cannot be maintained during treatment or restored through it, the prognosis of retention is most questionable.

Class I Cases.—In this classification, there is a point which I think should be emphasized, and it is this: While there are many unstable cases to start with which need treatment, there are also those with good alignment and functional relationship of the buccal teeth which are stable, even though there be slight lower anterior irregularities, and would remain stable if left alone, but might become unstable if subjected to appliance treatment where arch expansion was given.

Fig. 13.

Fig. 14.

We all have such cases in which we are consulted, and, while some parents may desire treatment just to correct the slight malalignment of the anterior teeth even after the questionable prognosis of retention has been explained to them, it is definitely contraindicated, and all concerned will be very unhappy if the wishes of the parents are carried out. If, on the other hand, the same stable condition of the buccal teeth exists but there is a pronounced irregularity of the lower anterior teeth which threatens the future health of those teeth and their surrounding structure, some compromise by the extraction of an anterior tooth with very little active treatment then being necessary to improve the

Fig. 15.

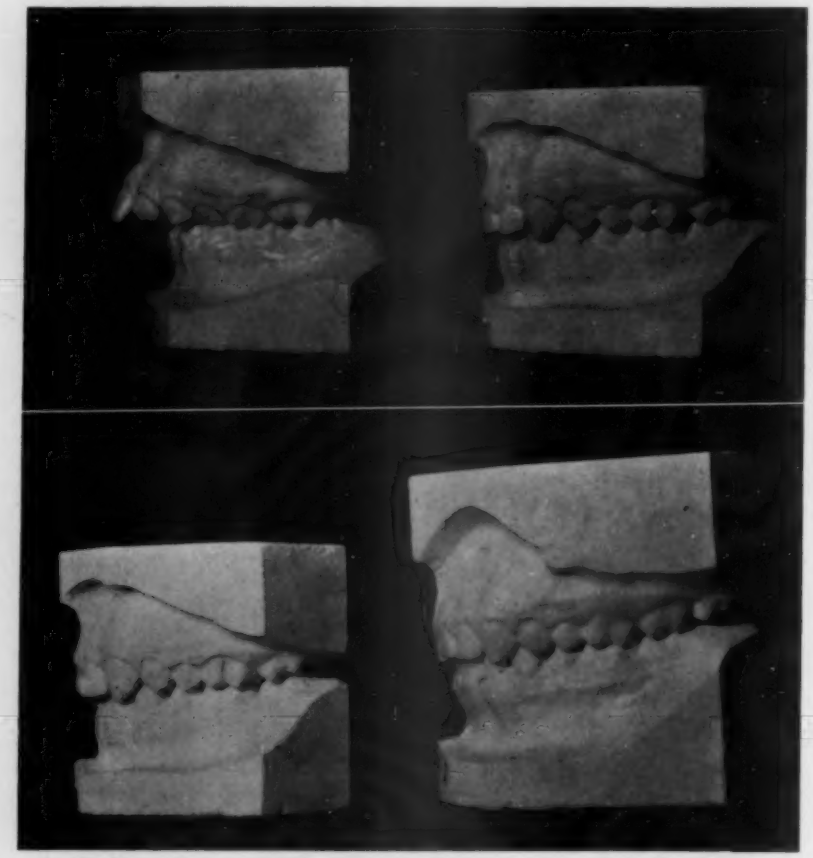


Fig. 16.

anterior alignment should be considered. This would not disturb the stability of the buccal teeth while establishing that of the anteriors and would have a favorable retention prognosis. Such a compromise should not be considered common practice but only warranted when, by so doing, it would give promise of the best possible retention. In a case where a satisfactory functional relationship and stability of the buccal teeth have been restored through treatment, there are times when the alignment of the anteriors or the width between the

mandibular canines does not hold, and this would be considered by some orthodontists to be a failure. I refer to cases where the anteriors are upright, of course, and over basal bone. Such is the case in Fig. 18, *A*, *B*, and *C* (Harlan B.). This patient presented for treatment at the age of 13 with a Class I malocclusion and a very disturbed functional relationship of the buccal teeth, due to the lingual inclination of the mandibular premolars, accompanied by a deep overbite. Following active treatment of one year's duration, the only mechanical retention employed was a canine to canine wire on the mandibular arch, which was worn for a year and a half. Fig. 19, *A* and *B* show the original photographs and those of the present time, with the patient now 19 years of age. He is a strapping, healthy specimen, over six feet tall, weighing one hundred and ninety pounds, and, incidentally, a brother of the patient just previously shown. Fig. 20, *A* and *B* show the case at the time when the retainer was removed, along with models just made, which is three years later.

A.

B.

Fig. 17.

Let me quote from Dr. Hellman's[10] last writings on this matter: "Is retention a failure when the perfect alignment brought about during active treatment has not been maintained? That depends upon whether the teeth are

in functional stability with the attendant health of their surrounding structures. If they are, that really was and should have been the purpose of rendering treatment, rather than their alignment being their paramount goal to attain, and retention is definitely not a failure."

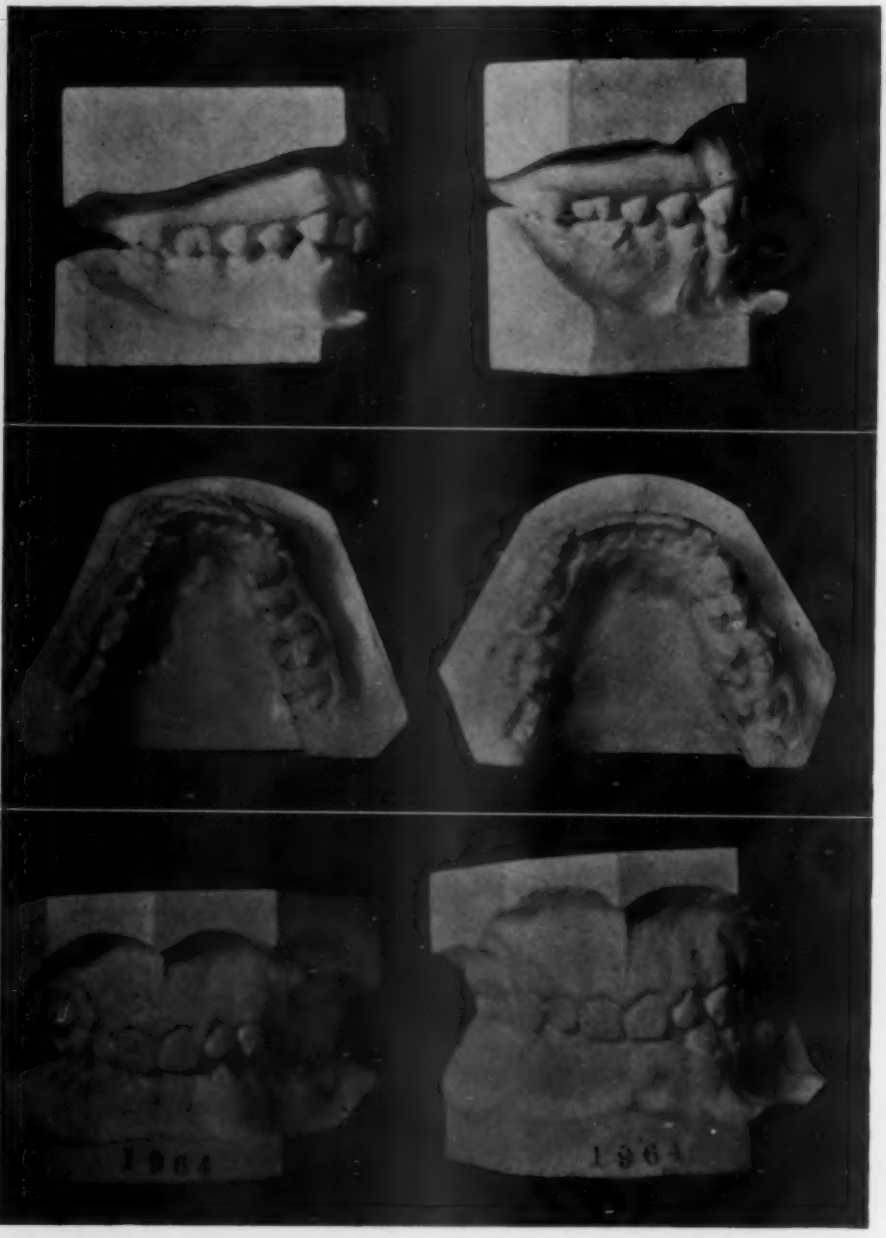


Fig. 18.

In a paper entitled "The Role of Growth Analysis in Orthodontic Interpretation," read before the Northeastern Society of Orthodontists at Atlantic City two months ago, Dr. Wilton Krogman stated: "Perfection may be the standard,

but adequacy is the goal.'' In Class I cases, where anything more than a slight increase in width between the mandibular canines and molars is necessary to accommodate *all* teeth in their correct functional occlusal relationships, the prognosis of retention is very unfavorable. This is one type of correction which probably in the past prompted the quotations made at the introduction of this paper. This was before the investigations on growth and development

A.

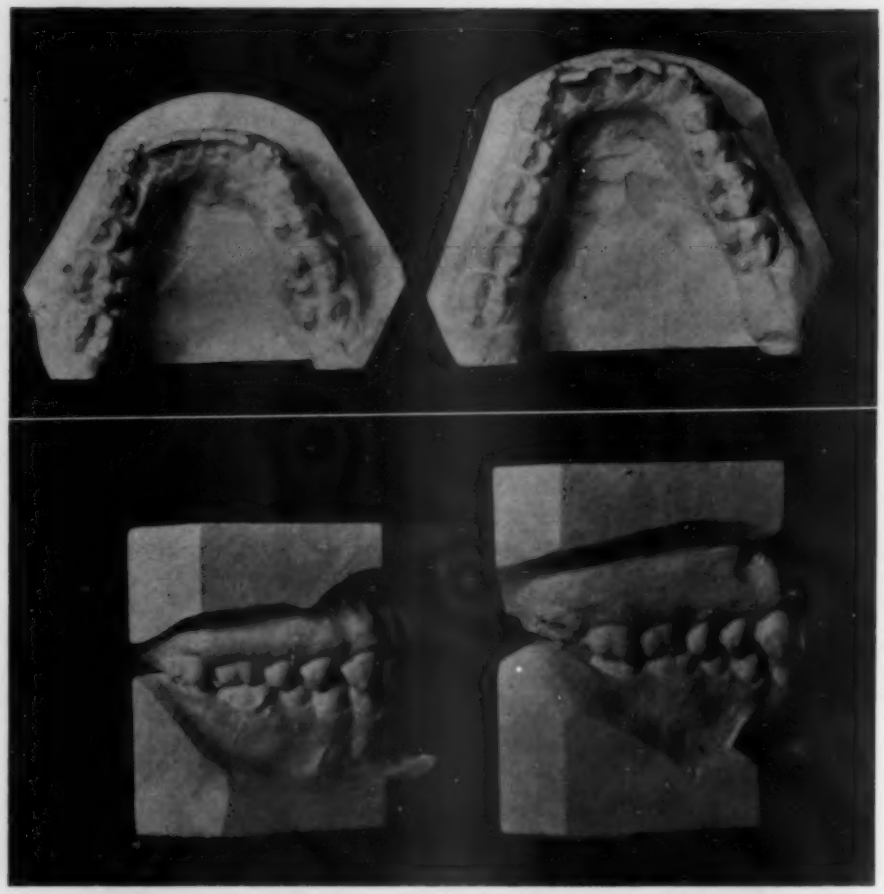
B.

Fig. 19.

by Hellman, Broadbent, Todd, Brodie, and others. At that time it was thought that tipped buccal teeth were the cause of poor retention, and later it was felt that bodily buccal movement of teeth would solve our retention difficulties and bring about development of basal bone. This, however, was not the case, and much later Brodie gave us the answer by stating that the osseous changes effected by an orthodontic mechanism are limited to the bones of the alveolar process.

In a recent personal communication from Dr. Robert Strang, he stated: "The preservation of the muscular balance by maintaining the original canine to canine width in the mandibular denture and not increasing the molar width to any appreciable degree is, in my mind, the answer to stabilization in the product of treatment."

A.



B.

Fig. 20.

In a paper read before the Edward H. Angle Society at California last spring entitled, "The Fallacy of Denture Expansion as a Treatment Procedure," [11] Strang stated as a part of his conclusions, "The form of the maxillary denture and the positioning of the maxillary teeth are governed by the mandibular denture form and tooth positioning, established by adhering to the dictates of muscular balance. When it is impossible to rearrange the mandibular dental units in the desired alignment with the incisors reestablished in locations overlying their basal supporting bone without moving the canine teeth libially and the molar teeth bucally, extraction of the dental units is definitely indicated. If the muscular balance is preserved in treatment, it

should be possible to eliminate mechanical retention at the end of active treatment and have a result that would remain stable." Since the teachings of Tweed there are many who have lately had this experience, and I give it to you as one of the reasons why I feel much more optimistic about retention.

Fig. 21.

Fig. 22.

Fig. 23.

The necessity of no retention following active treatment was advocated by our beloved teacher, John V. Mershon, long ago, and has as its basis light appliance stimulation along with rest periods which intervene during active treatment, thereby eliminating the necessity of retention. In discussing this with him at Atlantic City two months ago, Dr. Mershon reiterated that men still failed to treat our whole problem as one of growth and development, which by themselves go on intermittently with intervening active and rest periods.

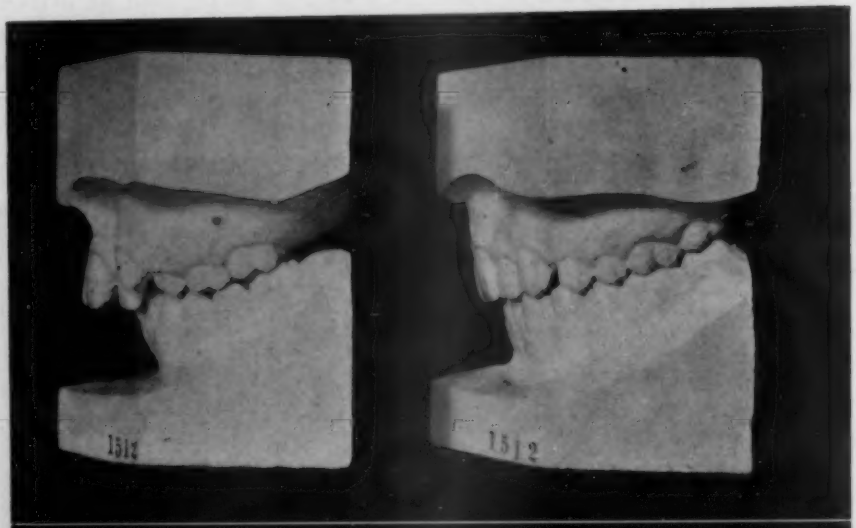


Fig. 24.

Fig. 25, *A*.

Fig. 25, *B*.

It should hardly be necessary to state that at the completion of treatment in all classifications of malocclusion, unless sufficient arch length, correct approximal contact, axial positioning, and rotations of all teeth have been brought about, favorable retention cannot be hoped for. To expect a tipped tooth to right itself through the forces of occlusion or muscular action is expecting too much of nature. It just does not happen. It cannot always be realized, but as Dr. Hellman said, "Let nature do the rest only after all has

A.

B.

Fig. 26.

been done that was needed, or that we are able to do." Fig. 21 illustrates this point (Betsy W.). This is the case of a girl, aged nine, for whom treatment was rendered but placed in retention before sufficient arch length had been brought about to establish the correct mesiodistal relationship of the buccal teeth. This did not correct itself during the retention period and a secondary period of treatment was necessary, the result of which is shown in Fig. 22. An acrylic plate with an inclined plane was then worn for two and one-half

years, and Fig. 23, model at the right, shows the case at the present time, six years after all mechanical retention was removed.

Class II Cases.—In Dr. Bercu Fischer's[9] paper on retention in 1942, in which he took stock of his cases, he grouped both those of mechanical retention and those without retention according to permanency of results into two categories, stable and unstable. I have read this paper many times and I strongly urge that it be studied by all who have not already done so. I, too, have found

A.

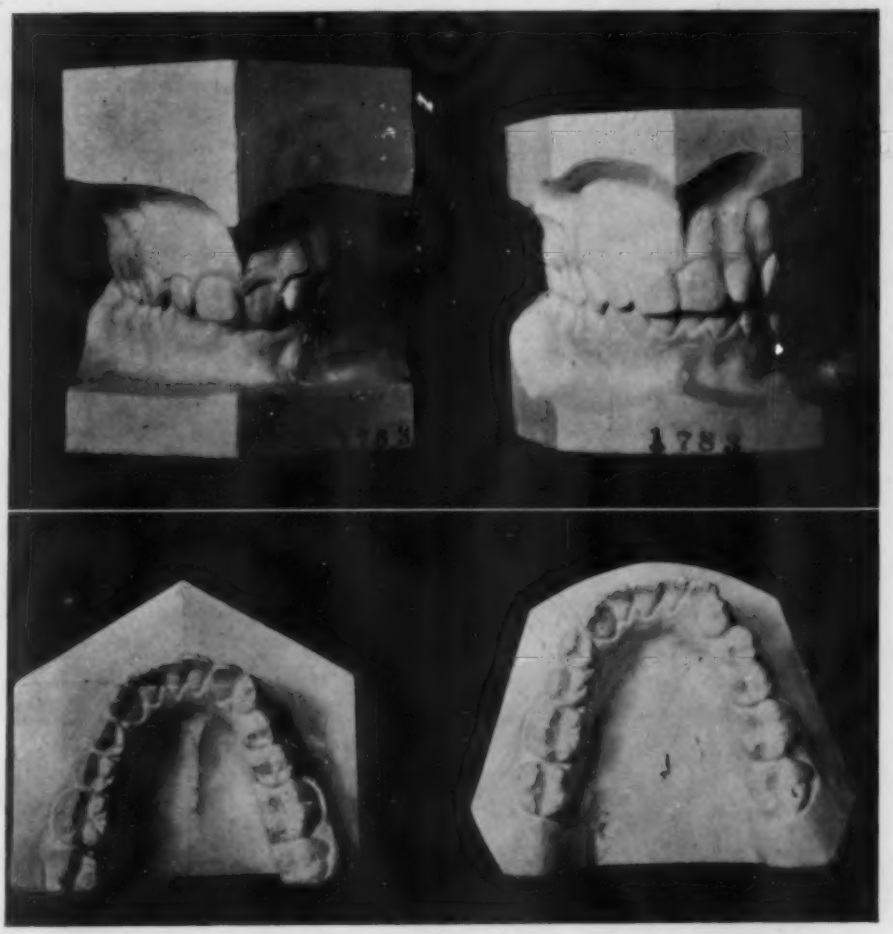
B.

Fig. 27.

that those cases not having crowded anteriors have been stable and their retention has been most favorable. Also, the corrected Class II molar relationships present very little trouble in retention. Fig. 24 (Gordon W.) shows a case of a boy, aged 11, with Class II malocclusion, whose active treatment extended over a period of two years, followed by two years of retention, with an acrylic plate

with inclined plane on the upper arch. Fig. 25, *A* and *B* show this case along with the original, four years after all retainers have been removed. Fig. 26, *A* and *B* show the original photographs and those of the patient today.

A.



B.

Fig. 28.

Fig. 27, *A* and *B* (Letty U.) show a cousin of the former case, aged 12, with a Class II, Division 2 malocclusion, again with no bunching of the lower anteriors. After one year of active treatment, the case was under retention for two years with a plate on the upper with an inclined plane and a plate on the lower arch. Fig. 28, *A* and *B* show the case along with the original at the present time, four years after all retainers have been off, and Fig. 29, *A* and *B* show oral photographs. The failure to rotate upper premolars and first molars during treatment until they are in correct cuspal occlusal relationship with their opposing teeth is to my mind one of the most frequent causes for relapse when retaining appliances are finally removed.

In extraction cases of any classification of malocclusion, it is my feeling that it may still be too soon to come to definite conclusions as to the *degree* of permanency of retention despite the satisfactory results obtained at the completion of the retention period. I am showing no cases, with the exception of one, treated this way, as I have none that have been out of retention a sufficient length of time. We do know that unless the canine roots are back and the second premolar roots forward in cases where first premolars were extracted, some space may open up between these teeth. It appears obvious that with molars being moved forward in extraction cases we will get fewer third molar impactions, and can expect better retention than when we moved buccal teeth distally with their tendancy to return forward to their original positions.

A.

B.

Fig. 29.

As to the influence that impacted third molars may have on the alignment of the anterior teeth, the findings of Broadbent[12] indicate that this influence is negligible and, therefore, the extraction of these teeth need not be considered

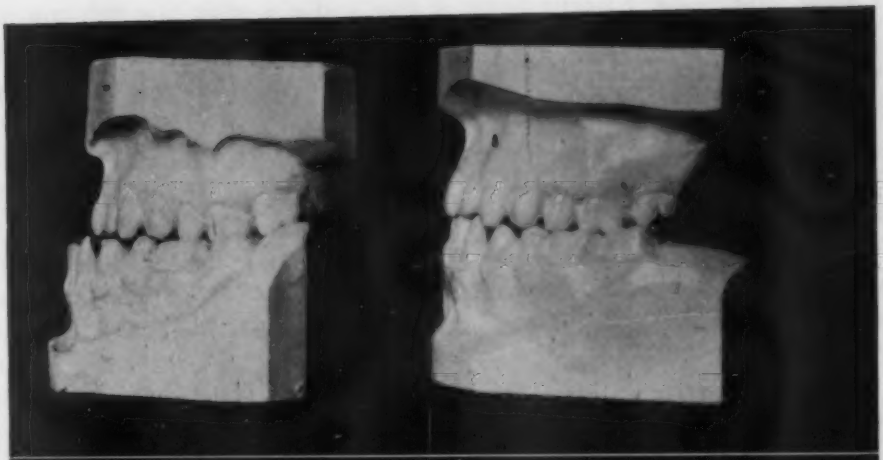


Fig. 30.

Fig. 31.

Fig. 32.

as it relates to the problem of retention. Parents often ask about this, and if x-rays show impactions, I advise them of this and also give this information to their general practitioner, as a problem for him to contend with.

Class III Cases.—I have had very little experience in the treatment of adult cases of this classification, but those cases that I have had have fortunately had a favorable prognosis. In these there were apparently no active endocrine disturbances which would have given a very unfavorable prognosis.

Fig. 30 (Dr. M.) shows a very pronounced Class III malocclusion, treatment of which was instituted while the patient was a dental student at the University of Pennsylvania. The same appliances used to carry on active treatment were allowed to remain as retainers, being gradually reduced over a period of three years, and Fig. 31 shows the case when all appliances were removed, along with its present conditions, eight years later. Fig. 32 shows the original and present conditions of the case.

FACTORS MAKING RETENTION QUESTIONABLE

Let us now consider those factors which we know spoil the chances of good retention.

Habits.—At all stages of dental development when treatment therapy is to be considered, until faulty habits are discontinued, retention prognosis is questionable. However, since hearing Dr. Gerald Pearson's[13] paper entitled, "Thumb Sucking and Other Oral Habits in Children and Their Relation to Development of Personality and Character," at the spring meeting of the Northeastern Society of Orthodontists, I shall be very wary in advising parents about trying to overcome thumb-sucking habits in youngsters for, from Dr. Pearson's observations as a psychiatrist, he stated that forceful measures used to overcome this habit may have most harmful and lasting effects upon the child's personality and character.

Tongue Habits.—The patients' habit of tonguing their words, as I call it, I find most difficult to cope with, and it is always accompanied by an open-bite. Fig. 33 shows the case of a girl who presented for treatment at the age of 6 years, 6 months, had a year's period of primary treatment followed by retention and later (Fig. 34) a year's period of secondary treatment followed by a year and a half of retention with acrylic plates on both arches. Fig. 35 shows original model and that made recently, three years after all retainers had been discontinued. The tongue habit is still present and, while it does not affect the occlusal relations, as shown by Fig. 36, *A* and *B*, there is still a slight open-bite which is not esthetically objectionable.

Hypertrophied Tongue.—If we have an exceptionally round mandibular arch with spaces between the teeth, to reduce this would present an unfavorable prognosis of retention. Also, in cases where extraction is to be resorted to in the mandibular arch if there is a hypertrophied tongue, the prognosis of retention should be questioned.

Flat Cusps of Buccal Teeth.—In Class II cases with this condition, where locking of cusps of buccal teeth cannot be depended upon, just the strengthening

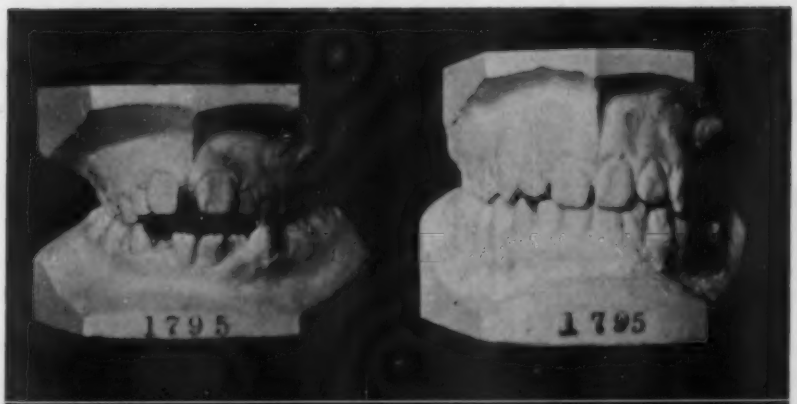


Fig. 33.

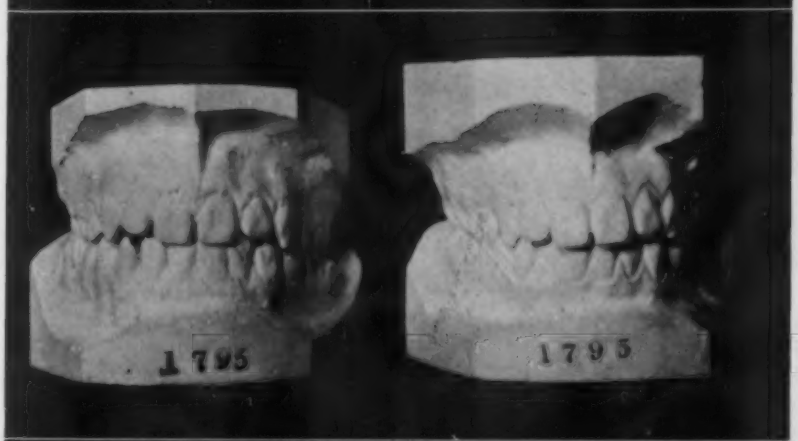


Fig. 34.

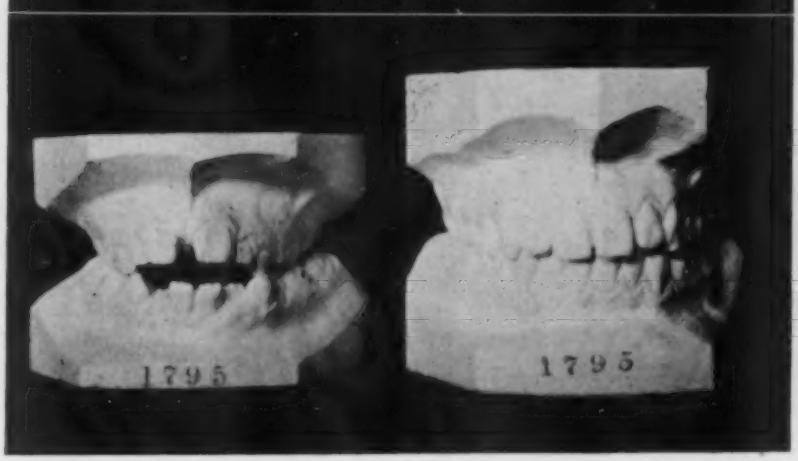
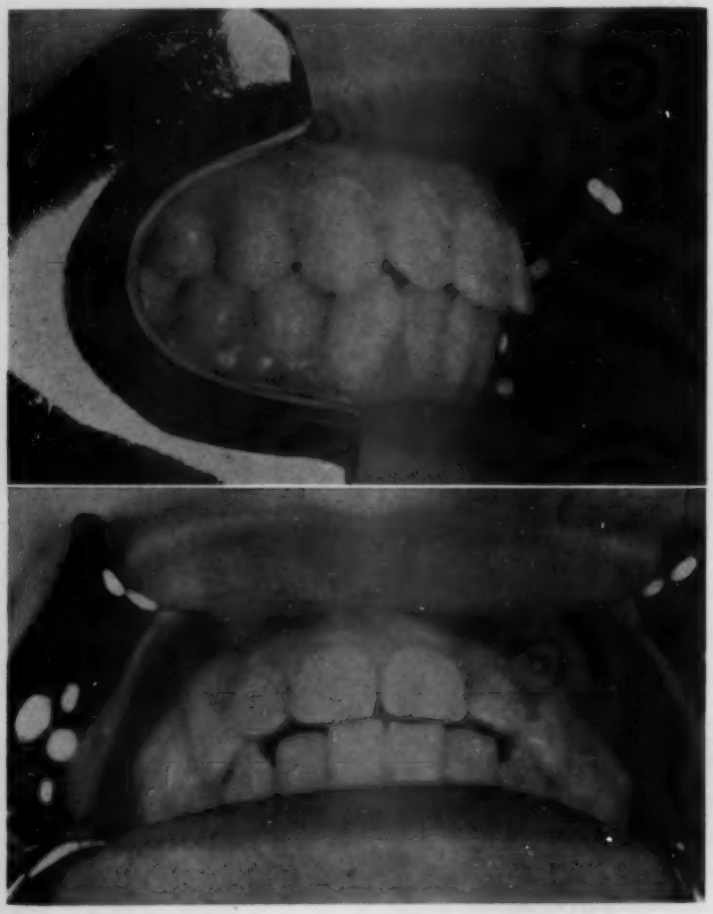


Fig. 35.

of the masseter-temporal muscles cannot be relied upon to maintain the corrected mesiodistal relationship, and the retention prognosis is very questionable. This would also hold true in Class III cases.

A.



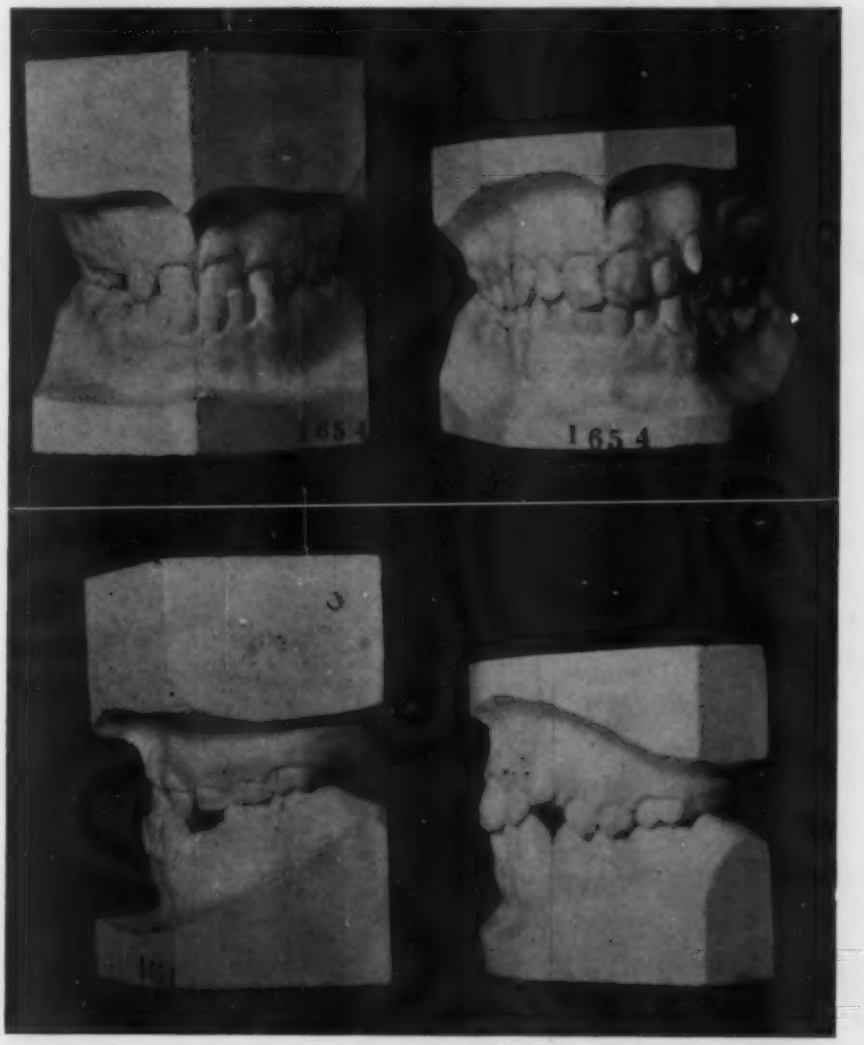
B.

Fig. 36.

Tight lip muscles can easily be detected at the time of taking original impressions and may exert sufficient pressure against the anteriors to prevent the maintaining of their alignment and even collapse the arch. Fig. 37, *A* and *B* (Frank G.) show a Class I case of a boy, aged 12. This patient had very tight lip muscles, and following the active treatment of a year and a half, no mechanical retention was necessary. Had it not been for the fact that he was away in the service for four years, I could have followed him up more closely. Fig. 38, *A*, *B*, *C*, and *D* show the influence that the tight lip muscles have had on the alignment of the anterior teeth since active treatment was discontinued, even though the functional relationship of the buccal teeth is very satisfactory. Fig. 39, *A* and *B* show the original and present-day photographs of this patient and show the tightness around the lips.

Fig. 40 *A* and *B* (Sears I.) is another case of tight lip muscles with very restricted dental arches in which extraction was resorted to. After a retention period of a year's time with an upper plate with inclined plane and three years with a lower canine to canine retaining band, there followed a relapse in the width between the mandibular canines due to the tight lip muscles, as you will see in Fig. 41, showing the case four years after all retainers were removed. Fig. 42, *A* shows the original and final models with the present width between the

A.



B.

Fig. 37.

mandibular canines the same as originally, while *B* and *C* show improvement over the original condition in the overbite, with a good functional relationship of the buccal teeth. In Fig. 43 we see that it has not interfered with the pleasing esthetic result.

Short upper lips, or those which lack tone and cannot be strengthened

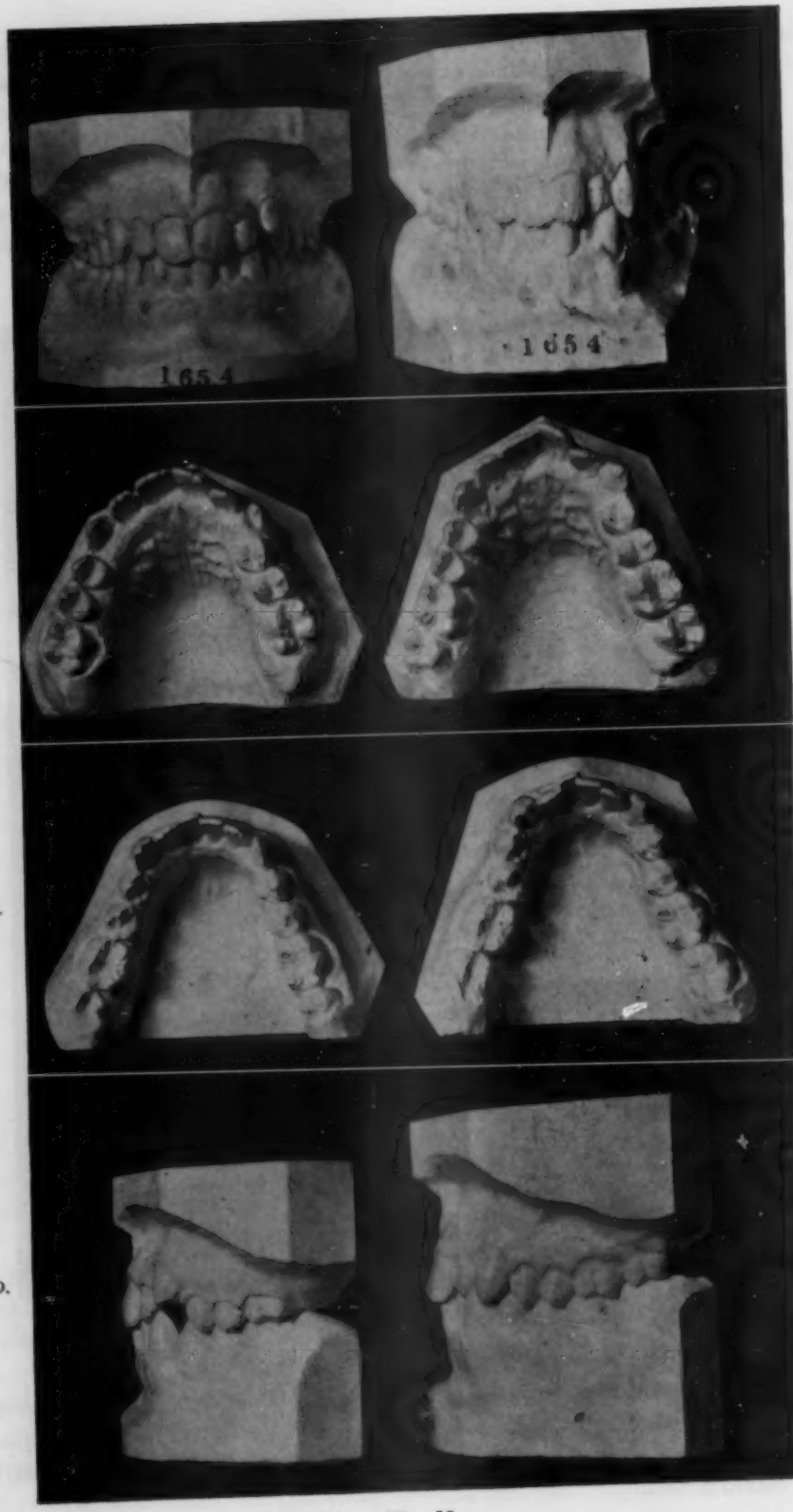


Fig. 38.

due to lack of cooperation in carrying out exercises, present a questionable prognosis in holding upper anterior teeth back in contact with the lowers.

Upper anterior rotations, even with enough space, may sometimes relapse, and parents should be apprised of this before instituting treatment. Fig. 44, *A* and *B* (Patty S.) show the case of a girl presenting for treatment at the age of 15, in which the upper left buccal segment had drifted mesially with a labioversion of the left lateral incisor. Were I to treat this case today, I might consider extraction of the upper left first premolar, rather than the distal movement of

A.

B.

Fig. 39.

the left buccal segment. Fig. 45, *A* and *B* show the mouth photographs of the case as it is today, seven years after treatment was discontinued, but this patient needed to wear her retaining plate for a long time to prevent the lateral from returning labially. You can see that although the mesiodistal relationship of the molars and premolars has held, the canine is slightly mesial and the lateral incisor labial, but not objectionably so.

Lack of harmony in the size of the teeth, interfering with occlusal relationship, limits the degree of favorable retention prognosis. Fig. 46 (Dick C.) shows such a case, and you will note the abnormally large mandibular premolars. Were I to treat this case today, I should certainly give serious consideration to extraction. Three years of active treatment were given in this case, only to have the war take this patient away from me, with no retainers being placed. Fig. 47, *A* and *B* show the relapse that took place in the anterior

Fig. 40, *A*.

Fig. 40, *B*.

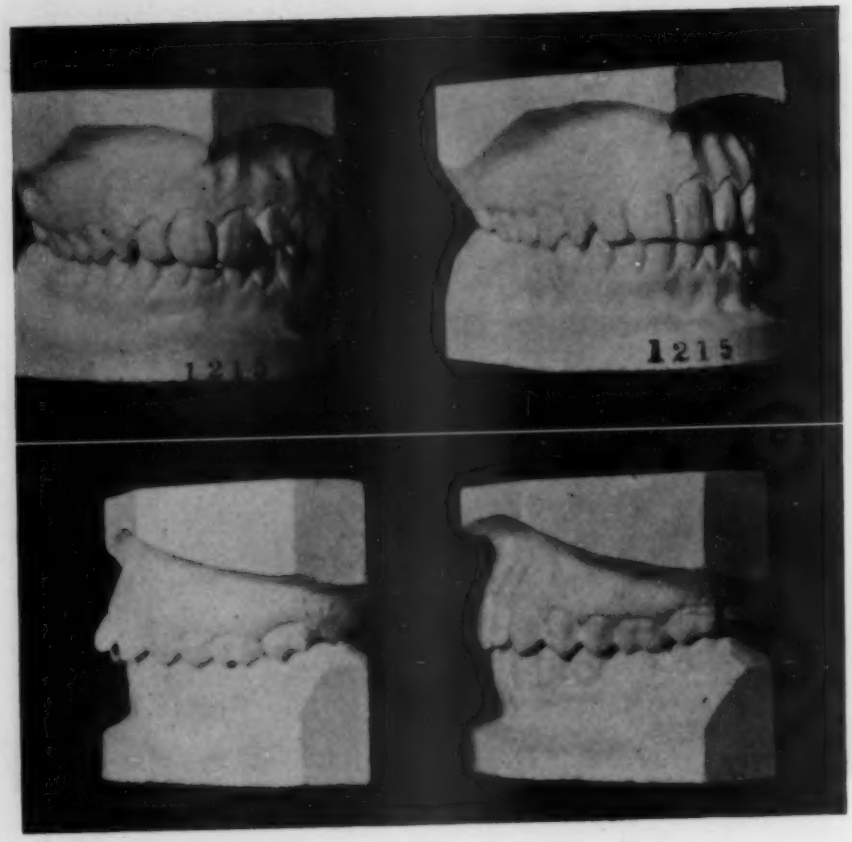
Fig. 41.

segment after four years, but Fig. 48 shows the original and present models showing how hard Nature has tried to help, for there is still a satisfactory functional mesiodistal relationship of the buccal teeth. Fig. 49, *A* and *B* show the original and present photographs of the boy, which shows why the case has

Fig. 42.

Fig. 43.

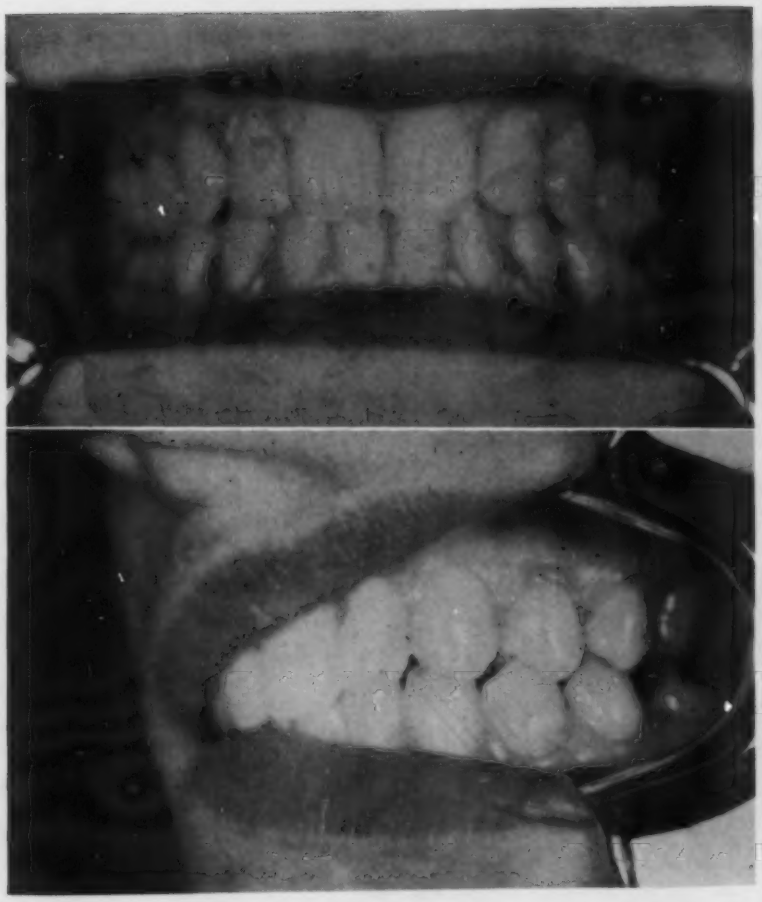
A.



B.

Fig. 44.

A.



B.

Fig. 45.

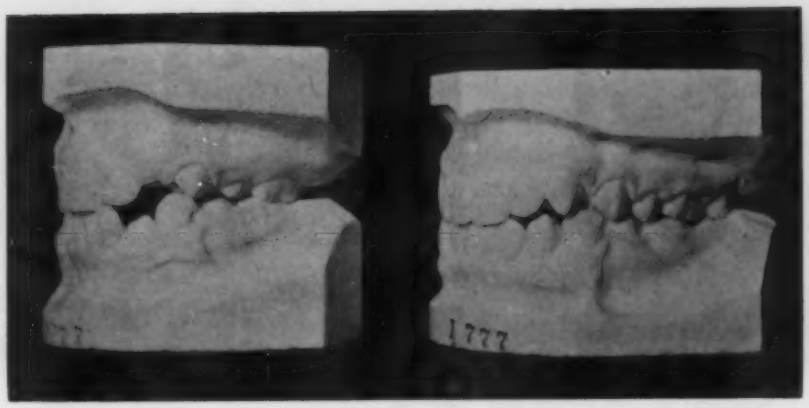


Fig. 46.

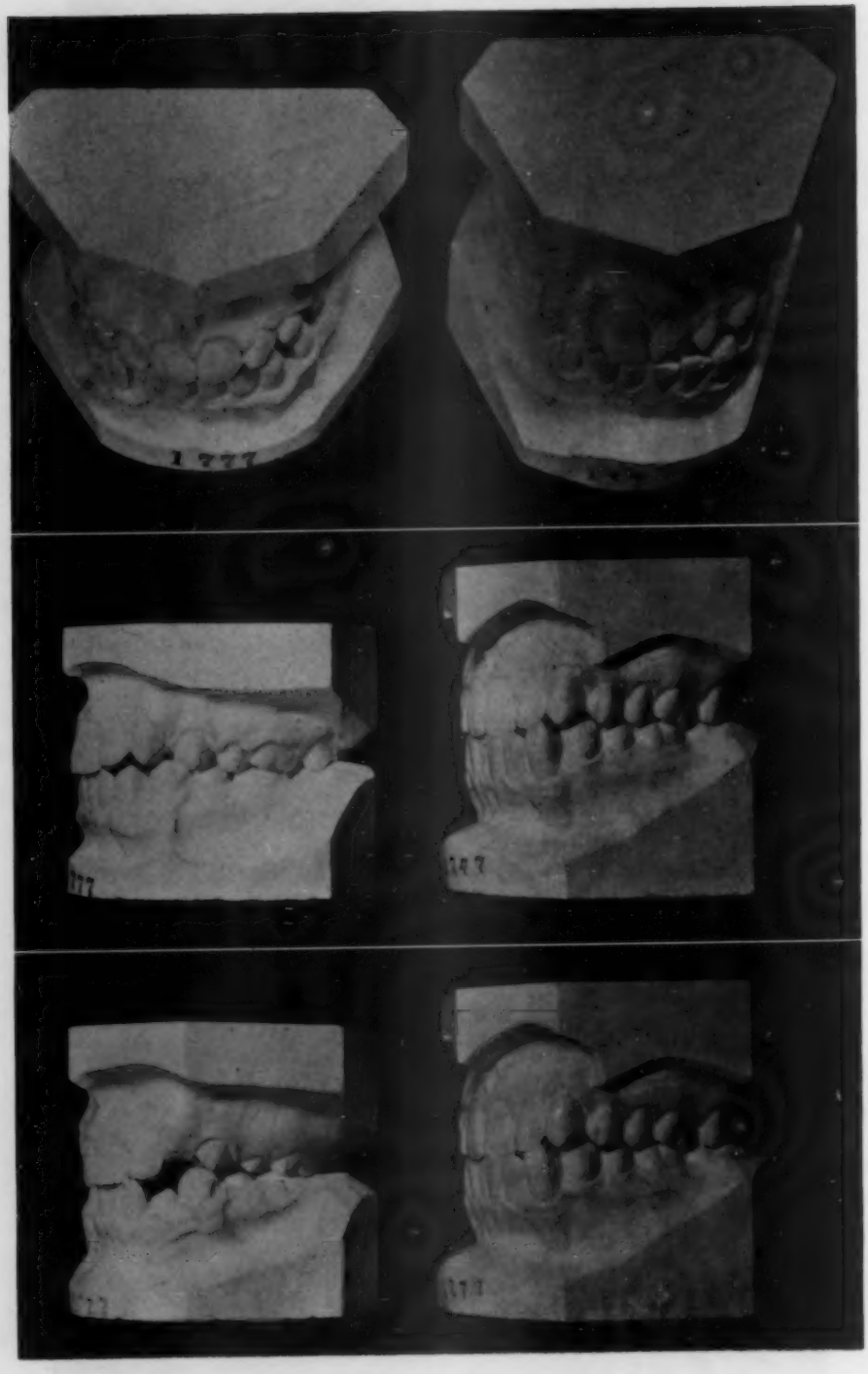


Fig. 47, *A*.

Fig. 47, *B*.

Fig. 48.

turned out as well as it has, namely: strong muscular action of the lips acting as a restraining force to prevent more labial reversion of the lower anteriors.

Bubble Gum.—I hesitate about mentioning this as a possibility of being a bad influence on protruding upper anteriors which are being retained after treatment, as I have not had the experience. However, a fellow orthodontist has recently reported that in several patients who chew this type of gum, which seems to require blowing bubbles by thrusting the tongue between the teeth, the anteriors have assumed a labial inclination in excess of their original malpositions. This I can readily understand, and I, therefore, advise my patients against the use of bubble gum.

A.

B.

Fig. 49.

Deep overbite conditions call for long mechanical retention during vertical growth and, when this is eventually discontinued, some relapse may be experienced.

Now the final question relative to the advisability of giving treatment where retention is questionable is this: Are we justified in rendering treatment when we feel that there will be some relapse? I would say yes, if we can suffi-

ciently improve the condition to give better than equal chance that the function of the dental apparatus, the health of the surrounding structures, and the esthetic condition will be permanently improved. In such an instance we should have a very clear understanding with the parents about the possible limitations of retention before treatment is instituted, and it should be confirmed in writing.

RETAINING APPLIANCES

Except in the instance of the rotation of an individual tooth requiring a retaining band with spurs, it has been our experience that the removable retainer which allows freedom in the occlusal movement of the teeth is the best form of mechanical retention we have. Being removable, it does not interfere with the cleaning of the teeth, and after being worn constantly for a certain length of time it can be gradually discontinued under our direction.

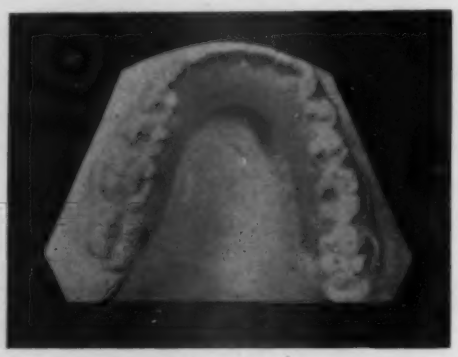


Fig. 50.

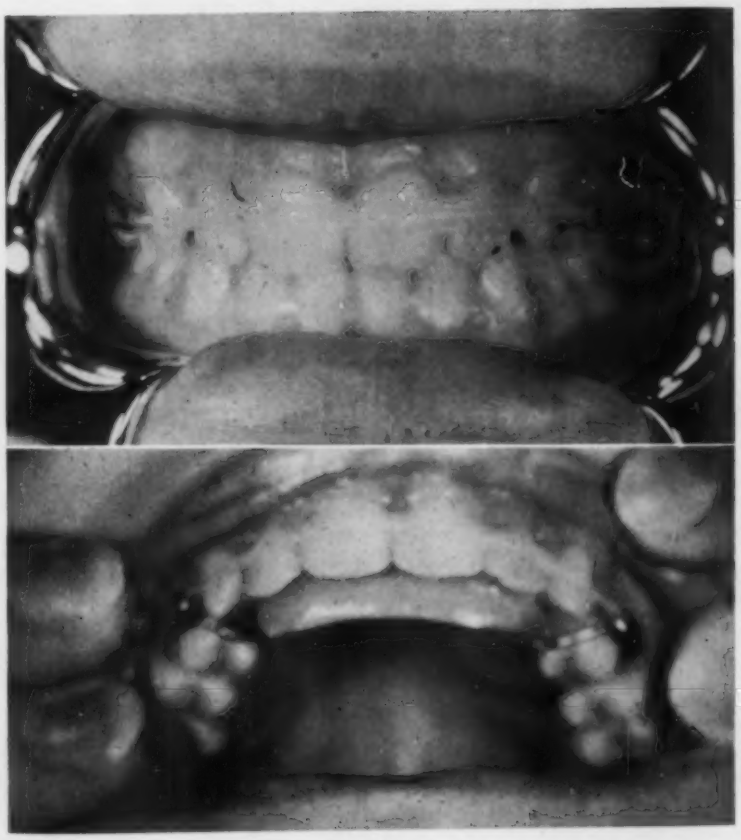
Now, as I have previously mentioned, there are hazards of loss or breakage, but that is mostly dependent upon the child, and when a plate is placed, if there is any question as to the cooperation we can expect from the patient, a letter is immediately sent to the parents explaining just what we have told the child, namely, the purpose of the plate, when it is to be worn, when and how much the masseter-temporal exercises are to be carried out in conjunction with it, and the care and cleanliness of the plate. We further write them that in case of accident or loss of the plate, we are to be notified immediately so that a replacement can be made and placed before any relapse occurs. "We hope this will not occur for a charge has to be made for replacement."

With this responsibility of the patient shared by the parent, it does cut down the losses of plates as well as misunderstandings following accidents and relapses.

While we have used many canine to canine retainers on the lower arch, we now feel that nothing as rigid is necessary, and instead use an acrylic plate, as is shown in Fig. 50. Following treatment of Class II and deep overbite cases, an inclined plane is placed on the maxillary plate, and masseter-temporal exercises are given. Fig. 51 shows two upper acrylic plates. Both of these two particular plates have been worn by patients. By having the upper plate cover the entire hard palate, we have not found clasps over premolars or molars

Fig. 51.

A.



B.

Fig. 52.

necessary, which sometimes had a tendency to elongate or force the tooth which was clasped palatally. In cases where lateral incisors were rotated, a wire resting against these as shown on the left model is very effective. Where the anterior teeth have been rotated or tipped palatally during treatment, an elastic stamped from rubber dam material may be worn across the anterior segment (after Spencer Atkinson) well down toward the incisal edge instead of having a wire resting on these teeth. Fig. 52, *A* and *B* (Margaret H.) show such a plate. This has its esthetic advantages as well as being active if necessary at the beginning of the period of mechanical retention.

We have had a rugged box made up just the size of the plate, and this is given each patient with explicit instructions to keep the plate in this box with the cover on at all times when the plate is out of his mouth. This would be when participating in athletics in which there is bodily contact, swimming, sailing, or even leaning over a bridge.

While I have never employed a Kesling tooth positioning appliance as a retainer, I do not feel that it has the advantage of the acrylic plate, for I question if it allows the occlusal freedom to the teeth which to my mind is so necessary following active treatment.

LENGTH OF RETENTION PERIOD

I can do no better than quote Oppenheim, who stated that the question of retention time remains an empiric question. He states that it is impossible to fix a certain time of retention, even for cases of the same appearance, of the same age and sex, and same diagnostic classification, for the reason, first of all, that we can never know how great are the damages that we have caused in reparative processes in the periodonteum.

It has been our experience that the continual wearing of removable plates for six months, followed by their being worn at night for the next six months, and then from there on gradually discontinued under our supervision has usually sufficed. The upper plate is also usually discontinued before the lower plate.

SUMMARY

1. While the literature of the past shows many uncertainties in retention, it may be due in part to the therapy of that time, and we can now be more optimistic.

2. Most satisfactory retention comes from treatment in different stages of dental development depending upon the type of malocclusion.

3. The purpose of treatment in deciduous and mixed dentitions should be to remove interferences to growth and development, restore a more normal functional activity of the dental apparatus and surrounding structures, this in turn to give promise of a favorable retention prognosis.

4. When a patient presents with permanent dentition, muscle balance must be maintained and stability brought about. Very little added arch length or width, therefore, should be attempted. If this would be necessary to accommodate all teeth in normal occlusion, extraction should be considered, as basal bone will not develop through appliance stimulation. Stability of

corrected Class II cases is favorable if mandibular anteriors were not crowded. Corrected overbite may need long retention, the final results being dependent upon the amount of vertical growth that takes place. Class III cases may require a long period of retention.

5. No case should be placed in retention until all has been done that was needed or that we are able to do. Following this, however, we should not consider retention a failure when perfect alignment is not maintained if functional stability with attendant health of surrounding structures exists.

6. Retaining appliances should allow functional occlusal freedom of the teeth and be employed only so long as their support is necessary.

7. Cooperation of the patient during the retention period is just as necessary as during the period of active treatment.

8. While increased knowledge and clinical experience have taught us much in what we can and cannot expect in retention prognosis, we recognize the fact that there are still factors over which we have no control and about which we have little or no knowledge that may influence the final outcome of our most earnest efforts.

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133 WATERMAN STREET.

TREATMENT PLAN AND TREATED CASES

WILLIAM M. JARRETT, D.D.S., CHARLESTON, W. VA.

PREFACE

I HAVE tried to select two cases from my practice that are similar and were treated by the same type of appliance therapy, yet one case was treated with a full complement of teeth and the other case had teeth removed.

These cases probably have more dentofacial anomalies than the average case we treat in our office. However, I think it will show in a small way whether we should resort to extractions in anomalies where there is more tooth substance than there is medullary bone to accommodate it.

CASE REPORTS

CASE A.—Dentofacial anomalies having the following characteristics: (A) Both dental arches in contraction. (B) upper teeth in protraction; (C) the lower dental arch in bilateral distoclusion to the upper dental arch; (D) underdeveloped mandible; (E) upper anterior teeth in attraction and lower anterior teeth in abstraction; (F) the Frankfort-mandibular plane angle 36°.

History.—G. S., girl, aged 12. Normal prenatal period, normal birth. Was sick a good deal the first eighteen months. Artificially fed. There was no history of habits. Her nutrition was closely watched by her parents. Mouth breather. She was subject to respiratory infection most of her life. Tonsil and adenoid tissue was removed at the age of 8.

Etiology.—It is my opinion that hereditary factors played a great part in causing this condition. The patient's mother and the maternal grandmother had narrow, constricted arches, high vault, and a slight open-bite. However, it is interesting to note that because of environmental conditions or other individual hereditary factors, this girl has a much more severe case of malocclusion than her ancestors. (Figs. 1, 2, 3, 4, 5, and 6.)

Treatment.—This case was treated with a full complement of teeth. After considering this case for some time, I decided that extractions would not be an aid in treatment. Dr. Johnson's philosophy was followed. A Mershon lingual appliance with lateral auxiliary springs was used in both arches until the required amount of expansion was acquired. Then they were removed so that the distal movement of the upper teeth could be more readily achieved. The twin wire alignment arches were placed without pressure being applied by the coil springs on the end sections. I find that when following Dr. Johnson's treatment plan of allowing the pressure from the intermaxillary rub-

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Fig. 1.

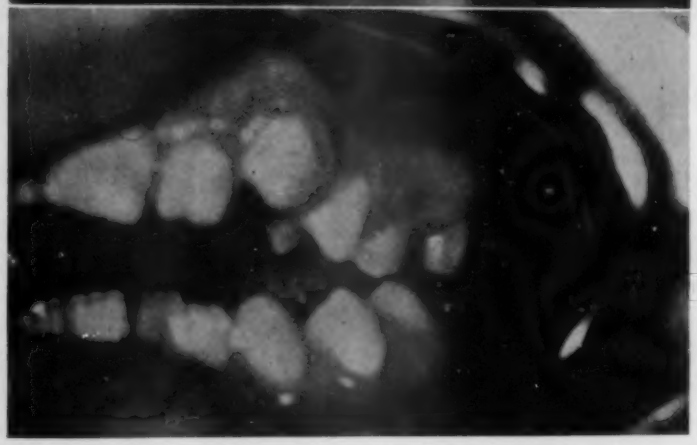
Fig. 2.

Figs. 1 and 2.—Front and profile photographs of patient before starting treatment.

Fig. 3.

Fig. 4.

Fig. 5.



Figs. 3, 4, and 5.—Photographs of the teeth before starting treatment.

bers to move the anterior teeth distally until the cuspids and premolars are jammed together, then applying pressure on the coil springs, we get faster distal movement. Because of the open-bite, the round buccal tubes on the molar bands of both upper and lower arches were soldered at an angle so that when the twin wire alignment arches were placed in them, the anterior segment of the arch rests at the incisal edge of the teeth. It can readily be seen that a gentle movement toward the occlusal will be gained when the twin wire arch is locked in the channels. After the arches were widened and the teeth brought into normal anteroposterior relationship, the bite was not completely closed, so hooks were soldered on the caps of the anterior bands and rubber bands were worn between the upper and lower teeth in the anterior part of the mouth at night only. (Figs. 7, 8, and 9.) This finished closing the space.

Fig. 6.—Casts of the case at the beginning of treatment.

Throughout this treatment, I tried to avoid using a great amount of pressure by the appliances or intermaxillary rubbers at any time. I have found that too much pressure will cause a bunching of the bone cells, which slows treatment a great deal. Dr. Johnson suggests 3 ounces of pressure for the appliances and 4 ounces of pressure for the intermaxillary rubbers.[1]

This case was treated in two years and six months, at which time Hawley retainers were placed on both the maxillary and mandibular teeth. The patient is still wearing retainers at night and there has been no relapse. I believe there will be a slight bunching of the lower anterior teeth when the retainers are discontinued. (Figs. 10, 11, 12, 13, 14, and 15.)

Case B.—Dentofacial anomalies having the following characteristics: (A) Both dental arches in contraction; (B) upper anterior teeth in protraction; (C)

Fig. 7.

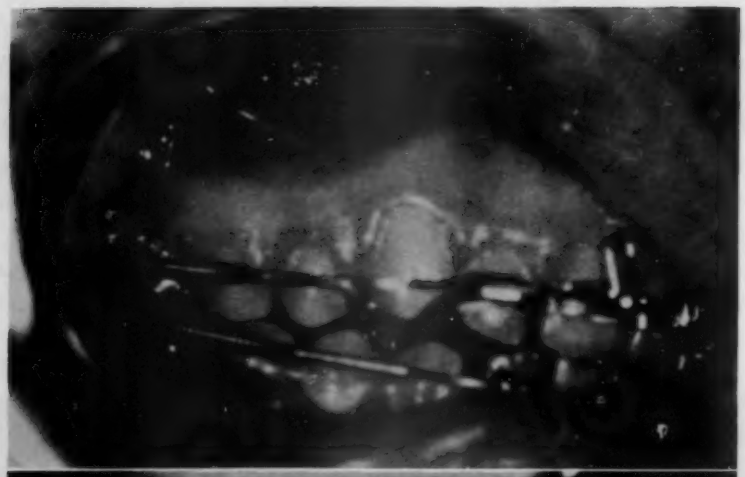


Fig. 8.

Fig. 9.

Figs. 7, 8, and 9.—Appliances used in the treatment of this case.

the lower dental arch in bilateral distoclusion to the upper dental arch; (D) underdeveloped mandible; (E) the Frankfort-mandibular plane angle 40°.

History.—Girl, aged 15. Poor hygienic condition of teeth and gums. Gums soft and spongy. Normal prenatal period, normal birth. Artificially fed. There was no history of habits. Well-balanced diet. All of her mother's family have narrow dental arches and crowded teeth.

Etiology.—Inheritance. Enlarged tonsils. Adenoid tissue. Mouth breathing. Figs. 16, 17, 18, 19, 20, and 21 show the case at the beginning of treatment.

Fig. 10.

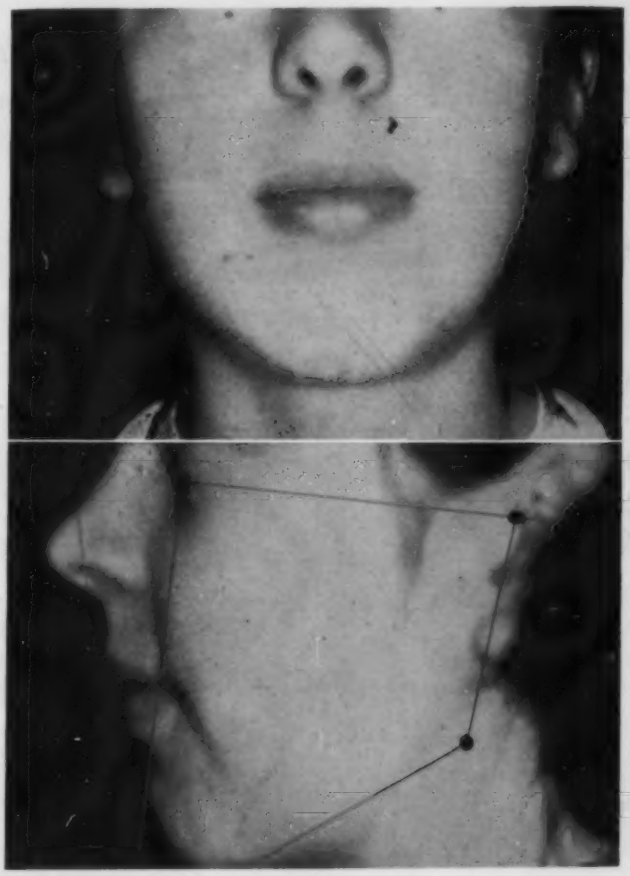


Fig. 11.

Figs. 10 and 11.—Front and profile view of patient at the end of treatment.

Treatment.—After carefully studying this case, we had the four second premolars removed. I prefer having the 12-year molars removed for a patient this age. However, two of her second premolars had large cavities so I did not think it advisable to take out good teeth and leave teeth that were not sound. Dr. Johnson's philosophy was followed to a great extent. A Mershon upper and lower lingual appliance with lateral auxiliary springs was used until the required amount of expansion was acquired. Then the lingual appliances were

Fig. 12.

Fig. 13.

Fig. 14.

Figs. 12, 13, and 14.—Photographs of the teeth at the end of treatment.

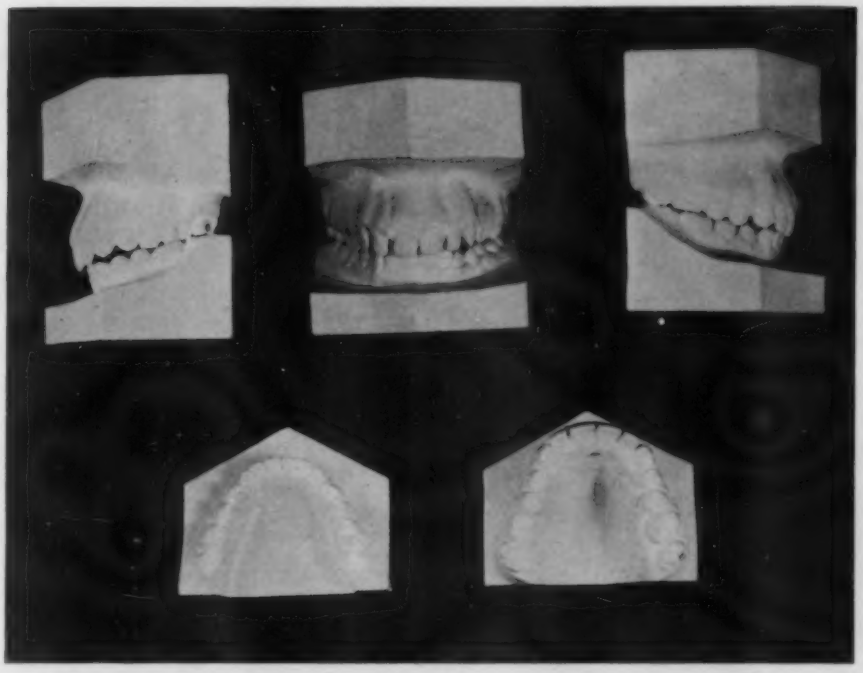


Fig. 15.—Photograph of casts at the end of treatment.

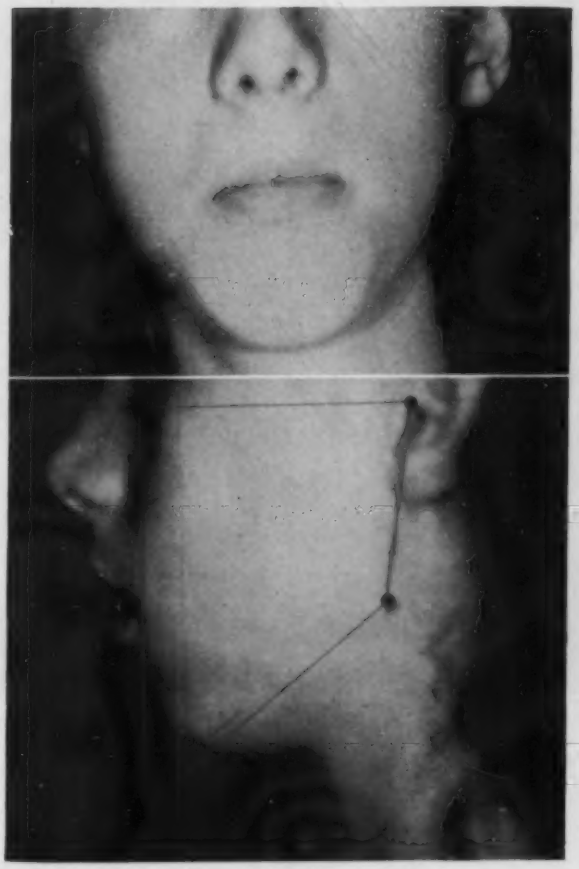


Fig. 16.

Fig. 17.

Figs. 16 and 17.—Front and profile photographs of patient before starting treatment.

Fig. 18.

Fig. 19.

Fig. 20.

Figs. 18, 19, and 20.—Photographs of the teeth at the beginning of treatment.

removed to facilitate closing the space where the premolars were extracted. The six maxillary anterior teeth were banded with Johnson anterior bands and a twin wire alignment arch placed.

Bands were placed on the mandibular cuspids. Twin snap channel brackets were attached to the bands. The labial appliance used on the mandibular arch has a 0.020 wire in the end section instead of the two 0.010 wires. The end section is crimped after the correct wire size is obtained. (Fig. 22.) This wire is snapped in the channel brackets on the cuspids and ligated to the four anterior teeth. This appliance will stand a lot of stress with practically no breakage. I like this type appliance on the lower arch where there are no teeth to rotate.

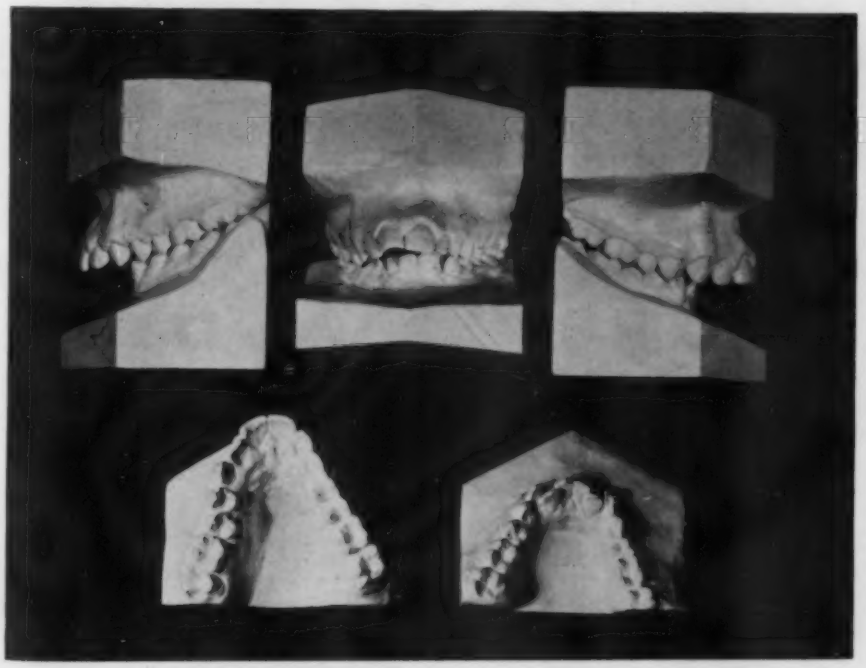


Fig. 21.—Photograph of casts at the beginning of treatment.

Both the maxillary and mandibular labial arches had pull back coil springs attached to close the space. Dr. Russell Irish showed me this type pull back action some years ago.[2] It is certainly an easy way of closing spaces and if properly used, works very efficiently. This is shown in Fig. 23. The appliances used in this case are shown in Figs. 24, 25, and 26. Sometimes, due to early loss of the 6-year molar, the 12-year molar comes in tipped to the mesial. A simple way of correcting this is shown in Fig. 27.

A headcap was worn at night to help correct the protraction of the upper anterior teeth. This case was completed in 18 months. Figs. 28, 29, 30, 31, 32, and 33 show the case after the appliances were removed and Hawley retainers had been worn.

Fig. 22.—Drawing showing the method of making a labial arch with one wire in the end sections instead of two.

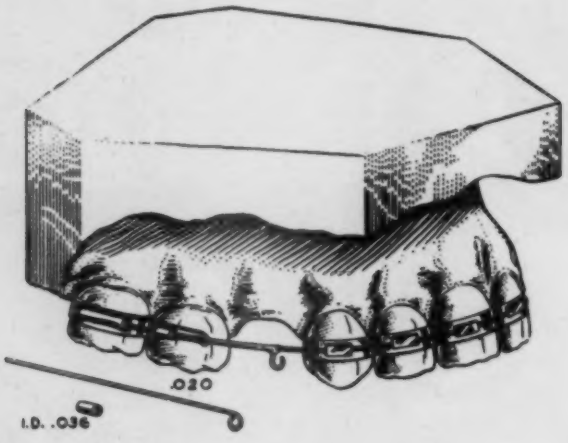


Fig. 23.—Drawing showing the pull back spring action.

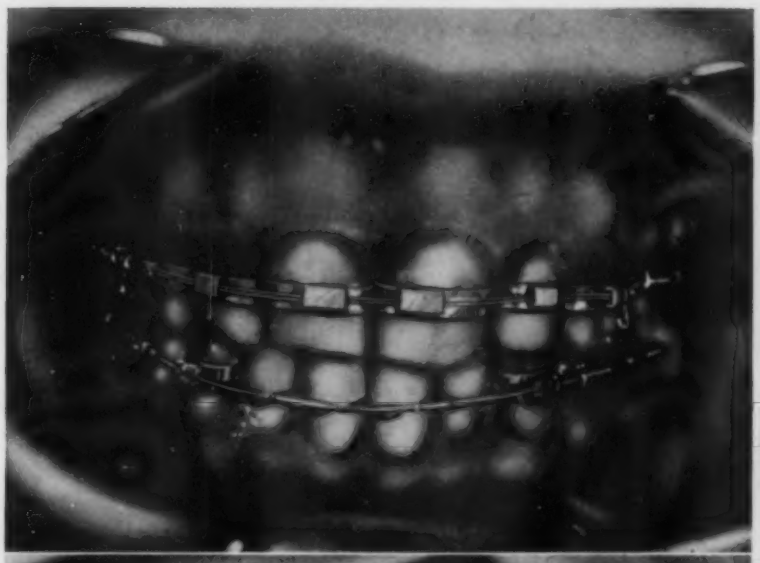


Fig. 24.

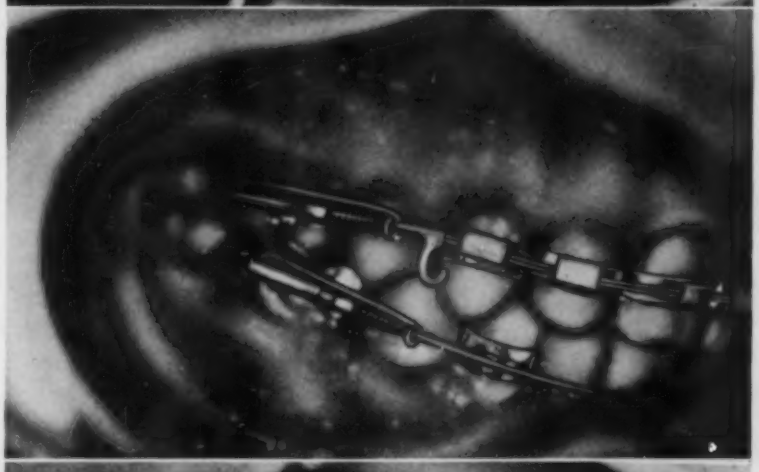


Fig. 25.

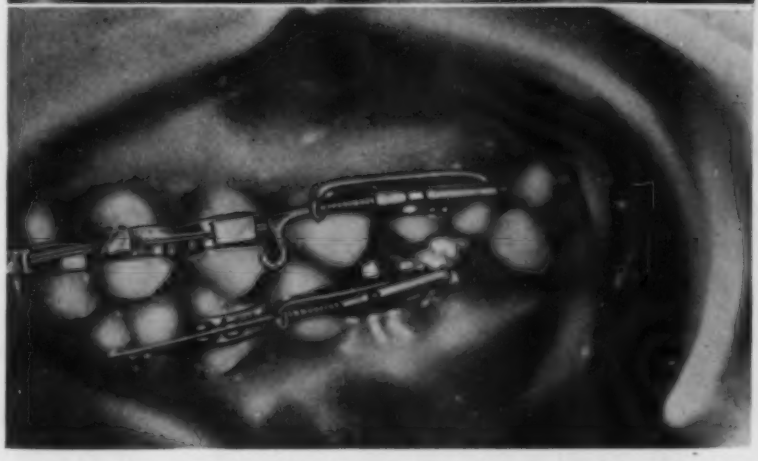


Fig. 26.

Figs. 24, 25, and 26.—Photographs of the appliances used in this case.

Fig. 27.—Drawing showing simple appliance used for correcting tipped molars. The buccal tube used in this type appliance is a swivel tube. The eye which is on the end of the wire which is soldered to the band is ligated to the labial arch wire.

Fig. 28.

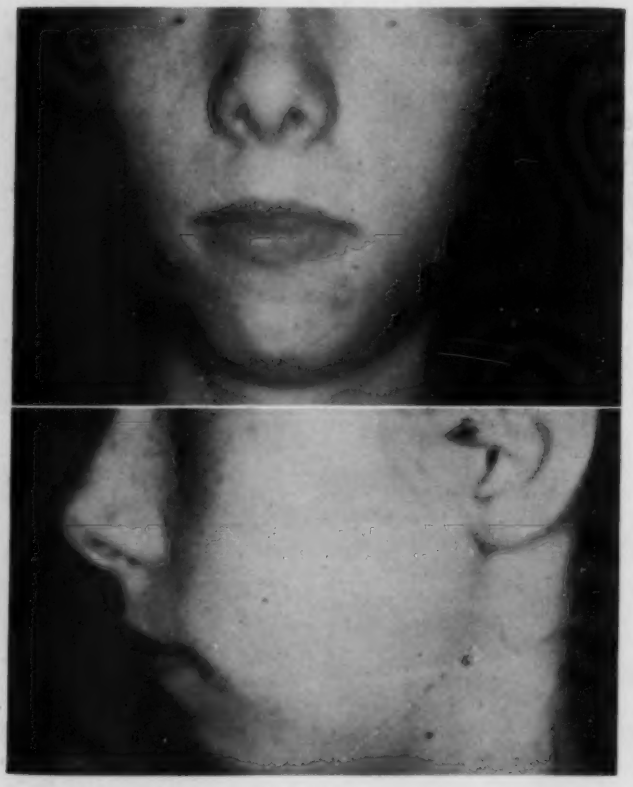


Fig. 29.

Figs. 28 and 29.—Front and profile view of patient at the end of treatment.

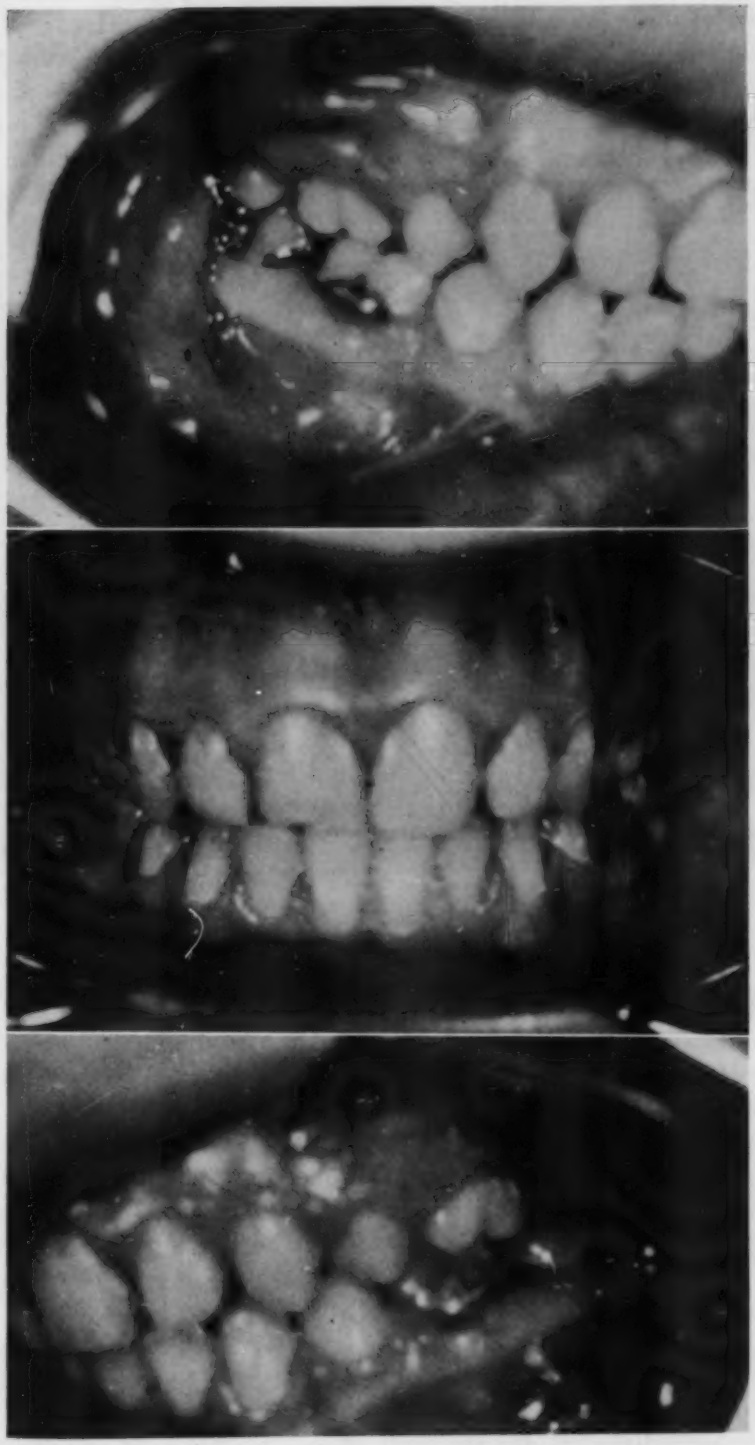


Fig. 30.

Fig. 31.

Fig. 32.

Figs. 30, 31, and 32.—Photographs of the teeth at the end of treatment.

After four months, the patient was instructed to wear the Hawley retainer at night only, which she is doing at this time.

The esthetic result was as good as could be hoped for in this type case. There is no crowding of the teeth, the gums are healthy, and I feel sure there will be no relapse after the retainers are discontinued.

Fig. 33.—Photograph of casts at the end of treatment.

SUMMARY

The two cases I have just reported certainly show the advantage of having the size of the tooth structure conform with the size of the arches. The second case was treated in almost a year less time with much more ease and with better dentofacial harmony than in the first case.

I believe that in cases in which there is any doubt of the over-all size of the tooth structure being larger than tooth accommodation size of the dental arches, the operator should resort to extraction as a part of the treatment therapy. The finished case will be more permanent, esthetically better, and the teeth and gums in a healthier condition.

At one time I corrected all cases without any regard to tooth substance and its relation in size to the bony structure. Jackson[3] said, "As a result of thousands of years of intermingling of races, we see every combination of the volume of tooth substance and bony development that can occur." The fact must be recognized that under the light of new teaching no growth takes place in the body of the mandible and maxilla anterior to the first permanent molars after their eruption. Yet, at one time we were taught that any individual's

growth potential would be adequate to accommodate a full complement of thirty-two teeth. How often have we seen the mandibular incisors which were left in protraction upright themselves, then crowd themselves into a segment of a smaller circle, and relapse had occurred. Nance[4] has shown that stability of the dentition is dependent on the correct positioning of teeth over foundation bone. To do this in mouths in which the bony structure is so limited in quantity, the elimination of some of the teeth may be necessary to assure a lasting result.

A few years ago an orthodontist would not show a finished case in which he had resorted to extractions without apologizing. With recent research made available to us, I am sure we undertake the treatment of many cases with a far more satisfactory concept of what the end of treatment will be and a greater assurance for a successful and lasting result.

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2. Irish, Russell E.: Personal communication to the author.
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901 KANAWHA BANKING AND TRUST BUILDING.

Erratum

In the article by Dr. Leonard P. Wahl entitled "Details of Management Conducive to Better Service and Patient-Clientele Relationship," which appeared in the April, 1948, issue of the JOURNAL, page 345, the last line of the fourth paragraph should read as follows:

. . . perfection shall merit the investment of your presence here today.

Editorial

Autokinesis

If letters to the editor are any criterion, many orthodontists read and reread the article, "The Role of Autokinesis in Treatment of Malocclusion," in *Dental Survey* for September, 1948. Like most of the readers, you probably had a vague idea that "autokinesis" means some kind of self-propulsion. Upon checking with the medical dictionary you no doubt observed that, used in connection with the correction of malocclusion, the author meant self-movement of teeth, migration, growth, or whatever it is that happens over a long period of time in the mouths of growing children subsequent to the extraction of permanent teeth.

The author recommends this treatment (to quote his own nomenclature) "in buck tooth malocclusion" and in cases where the "cuspids have power enough to force their way into position by crowding the laterals labially." The author summarized his findings briefly as follows: "The first bicuspids are the first choice for removal in most cases of 'buck tooth' malocclusion, second bicuspids, a close second choice and molars are sacrificed only when beyond repair. . . . the result is good if the extraction is performed at about the tenth year, but results are progressively satisfactory as age advances and upper incisors never should be sacrificed and cuspids very rarely."

This recalls to mind the fact that history does repeat itself, and many times what is resurrected may persuade some to quit their established practice for ways that seem unorthodox. Zeal for something dramatic, like a real estate boom or a religious revival, may be a state of enthusiasm and therefore temporary.

A few people with a new idea or change, whether in things scientific or otherwise, are unselfish idealists whose one desire is to do good, but the most cursory examination will reveal that the real danger often lies on the outer fringe of such movements where ideals go "out the window" and expediency takes over.

It is true and it has been satisfactorily proved not only clinically but also in all of the cephalometric studies, that scientific workers have found that subsequent to the extraction of children's teeth, migration of teeth does take place rapidly. The teeth assume a different relationship in the dental arch after sufficient time elapses, and without orthodontic treatment. As a matter of record, that type of practice constituted most orthodontic treatment practiced by the dental profession pre-Angle and pre- the full complement of teeth theory.

The careless and unstudied extraction of teeth in growing children as an expediency measure without regard to the ultimate biologic changes that occur

in the face and cranium is not new. This idea carried too far can take orthodontics right back to where it started from about the beginning of the century.

He who knows his orthodontic history and background will quickly recognize "autokinesis" as the practice of extracting children's teeth in order to set up a shift or tooth migration. There is nothing wrong with it other than that the cure many times is worse than the disease and that the treatment begins with the teeth and ends there.

It's the "same old barn with a new coat of paint," and orthodontists should quickly resist the advance of any type of treatment that has for its goal straight teeth with complete abandonment of the effect upon the bulk and size of the supporting tissues.

H. C. P.

In Memoriam

ALBERT B. JOHNSON
1895—1948

ALBERT B. JOHNSON was born in Portland, Maine, June 5, 1895, and was educated in the public schools of Portland and North Yarmouth Academy. He was a graduate of Harvard Dental School, and also attended Dewey, Rogers, and the Strang Schools of Orthodontia. He was a member of the Edward H. Angle Society, the American and New York Societies of Orthodontists, the Academy International of Medicine and Dentistry, the New England, Maine and Portland Dental Societies, also a past-president of the Portland Dental Society.

His boyhood ambition was to be an aviator, and he did own and pilot one of the first airplanes brought to Maine for private use. He was treasurer and director of the original Portland City Airport.

At one time, Dr. Johnson operated the dental clinic of the Children's Hospital of Portland, Maine; then he started his own practice in 1921.

He was an amateur magician, and his main hobby was collecting handcuffs and leg irons, of which he had a large collection. He often gave benefit performances. He was very fond of yachting and has owned four different yachts. He served in the Coast Guard Auxiliary during the last World War, using his own yacht to patrol the coast. He was a member of various masonic bodies, and a past patron of the Eastern Star.

To mourn his loss are his only son, Robert Noel Johnson, and his wife, Leah B. Johnson. Dr. Johnson died July 3, 1948, less than a month after his fifty-third birthday.

Paul J. McKenna
1893—1948

PAUL J. McKENNA of Springfield, Massachusetts, died on Aug. 31, 1948, at St. Francis Hospital in Hartford after a brief illness.

Dr. McKenna was past-president of the Springfield and Massachusetts Dental Associations. He maintained offices at 14 Chestnut Street and at the Clarke School for the Deaf in Northampton, where he had been consultant in orthodontics since 1919. He was president of the Springfield Dental Association in 1935, president of the Massachusetts Dental Association from 1936 to 1937, and a member of the American Association of Orthodontists.

Born in East Boston March 24, 1893, son of George S. and Margaret E. (Mitten) McKenna, he attended Boston public schools and Bryant & Stratton

Business College. On graduation from Tufts Dental College in 1918, he took postgraduate training at the Dewey School of Orthodontia in New York City before beginning his practice here.

On July 6, 1925, at Holy Cross Church in Holyoke, Dr. McKenna married Catherine (Dowling) McCormick of that city.

Besides his wife and parents, Dr. McKenna leaves four sons, Paul J., Jr., a student at Tufts Dental College; David J., a student at Tufts College; George S., a student at Wilbraham Academy, and John C., at home, and a daughter, Catherine Marie, a student at New Rochelle College, New Rochelle, N. Y.

He also leaves two brothers, Dr. Ernest J. McKenna of Boston and Dr. George S. McKenna of Providence, R. I., and two sisters, Mrs. Edward T. Cauley and Mrs. Thomas Garvey, both of Brookline.

Department of Orthodontic Abstracts and Reviews

Edited by

DR. J. A. SALZMANN, NEW YORK CITY

All communications concerning further information about abstracted material and the acceptance of articles or books for consideration in this department should be addressed to Dr. J. A. Salzmann, 654 Madison Avenue, New York City

Death, Defect, and Disability in Prenatal Life, an Epidemiologic Consideration: By John E. Gordon, M.D., F.A.P.H.A., and Theodore H. Ingalls, M.D., Department of Epidemiology, Harvard School of Public Health, Boston, Mass., *Am. J. Pub. Health* **38**: 66-74, January, 1948.

That developmental defects represent something more than unavoidable accidents of Nature, that collectively they constitute a problem of grouped populations of concern to the public health, has been a concept of slow evolution.

Initial interest in congenital anomalies was clinical and the first results of this interest were manifest as far back as the sixteenth century, with a great collection of case reports describing the bizarre and unusual rather than the commonly observed abnormality. The next development was evident more than two hundred years ago in attempts at classification on purely morphologic grounds. Early efforts such as those of Buffon were concerned largely with the groupings of freaks—dwarfs and giants, two-headed babies, sirenlike creatures with a single fused leg, three-legged men, hermaphrodites, and all the rest.

Geoffrey St. Hilaire founded the science of teratology and christened it with its name derived from the Greek word meaning monster. He assembled the first definitive collection of clinical cases giving facts about the mother as well as the child. He improved on previous classifications and formulated laws by statistical analysis of his material—proving, for example, that conjoined monsters, like the Siamese twins, were always of the same sex. He was fully cognizant that further advances of medicine were necessary before investigators could cope with factors of etiology, but he clearly defined the nature of the problem which confronted them: "If . . . anomalous beings are created . . . according to natural laws; if their deviations are the effects of disturbances and adverse influences happening during the course of development; if their causes are only accidental—and of this there can no longer be any doubt—another subject for research presents itself, a subject important, immense and capital: the determination of causes."

Epidemiologists gave little attention to the field until Gregg's observation in 1941 that rubella during early pregnancy may result in congenital deformity of the child. That such a simple etiological relationship had escaped recognition for generations seems almost unbelievable to some who have postulated that a change in virulence of the virus of rubella accounts for the supposedly new phenomenon; yet the history of medicine is replete with discoveries that in retrospect seem obvious. Rubella itself was confused with measles until about a century ago. During the years that followed, the criteria for likeness or difference among infectious diseases became biologic; among congenital malformations they have remained anachronistically clinical. The reason was that biologic information remained lacking except in regard to syphilis and certain hereditary diseases.

As a cause of death in the United States, the rate from congenital malformations was 12.6 per 100,000 population in 1944. The importance of this group to

the public health is indicated by its rank of tenth among the principal causes of death for all age groups. They rated third for deaths among infants under 1 year of age, the ratio being 553.7 per 100,000 and surpassed only by prematurity and pneumonia.

Death rates give no indication of loss to the human race by virtue of crippling, or anomalous conditions causing or related to stillbirths and abortions. Mall, after a lifetime study of prenatal pathology, came to the conclusion that about "80 of 100 pregnancies terminate in the birth of normal individuals; seven are aborted as pathological ova containing radical changes within them and about one produces a monster at term. The remaining twelve fetuses and embryos are by no means all normal for we are constantly finding in them, especially the younger specimens, minor changes which must be viewed as the forerunners to real monsters." Supporting these observations is MacGregor's finding that death was attributable to developmental defects in 20.2 per cent of a series of 435 stillbirths, and in 10.5 per cent of a series of 618 neonatal deaths.

Any discussion of factors governing fetal death and deformity must take into account definite biologic evidence that the fetus is more vulnerable to adversity at certain periods of its development than at others. Some ten thousand prenatal deaths reported from New York City in 1944, arranged by month of gestation when the product of conception was passed, show a biphasic distribution. The frequencies characterizing the first two months of pregnancy are doubtless materially less than fact, in that many instances remain unrecognized, and reporting of those that are apparent is generally less complete than at later periods.

The biphasic vulnerability of the pregnant host is evidenced by observations made on women who contracted pandemic influenza in 1918. Harris analyzed the outcome of 1,350 pregnancies complicated by influenza and found that pregnancy was interrupted in 36 per cent prior to the ninth month of gestation. Other diseases shown to play an important part in prenatal death are measles, German measles, smallpox, syphilis, and typhoid fever.

Though death of the child results rather frequently from agents acting during gestation, the evidence shows the risk to be relative. What of the babies who survive and what of the possibility that they experience congenital effects of disease? An epidemiologic approach to these questions is favored by the accumulated knowledge of genetics, embryology, and clinical medicine. As a point of departure, it may be taken as reasonably well established that two main types of congenital deformities exist—the hereditary and the acquired—and, furthermore, that differentiation of the two by morphologic criteria is accomplished with more difficulty than is ordinarily appreciated.

Congenital physical traits when dominantly inherited offer little opportunity for confusion with acquired deformities, only because they occur in significant numbers within the family and its forebears. Recessive traits of man cannot, however, be differentiated by these criteria, which are in essence epidemiologic, in the absence of a comprehensive family genealogy. Since the inherited anomaly is related to chromosomal patterns, and the acquired anomaly to the stage of development at which it originated, the possibility is evident that the two kinds of deformities might be separated on the basis of differing clinical patterns. To date such criteria for differentiation have not been established.

That both genetic and acquired factors are necessary for the production of some diseases is illustrated by erythroblastosis. Without a peculiar host constitution inherited from father and mother, the fetus does not develop this condition. Nevertheless, hereditary factors are not of themselves the sole cause, for erythroblastosis occurs in only a fraction of infants with that inherited predisposition. An inciting factor, namely, the entrance of incompatible erythrocytes

into the maternal circulation to produce immunization, is essential. Better diagnostic methods are necessary to an improved and quantitative determination of the individual significance of hereditary and acquired factors in the causation of anomalies. The problems arising from the atomic bombing of Hiroshima and Nagasaki illustrate the difficulty in attempting to group human anomalies according to origin as either hereditary or acquired. Should anomalies be observed in significant numbers with the immediate future, those occurring among infants of mothers pregnant at the time of the event would clearly represent acquired anomalies; those of future pregnancies present an impossible decision between nontransmissible injuries and transmissible injuries—mutations—of the parental germ plasm. Only through observation of future generations could the nature and frequency of possible mutations be satisfactorily settled.

Clinical knowledge of the causes of acquired anomalies of man, except for those of syphilitic origin, is of recent development and limited extent.

Stockard concluded that analogous phenomena were the cause of human monstrosities, but he was unable to prove the point, despite intensive studies on the effects of alcoholism in pregnancy. Gregg's observation in 1941 that rubella in the mother frequently leads to deformity of the unborn child remedied that deficiency. More important, it showed the way to a systematic exploration of a new field by correlated epidemiologic, clinical, and embryologic studies.

Accumulated embryologic knowledge is so precise that the stage of development at which many deformities come into being can be determined with reasonable certainty. Thus, congenital cataract of the central or nuclear type and certain congenital heart diseases such as interventricular septal defects represent defective development in the first trimester of pregnancy. Yet, the anomalies observed as an aftereffect of rubella proved that such diverse organs as the heart, brain, eye, tooth, and ear may be deformed by the action of a single agent at a critical period of development.

A correlation has been established between the trimester in which maternal rubella occurred and the trimester in which active differentiation of the affected organs was taking place. It has also been established that the result of this impact is variable; an anomaly may follow, the fetus may die, or it may escape manifest sequelae of rubella. The inference is that morphologic classification of congenital malforations, though of crucial importance to clinical treatment and prognosis, has not intrinsic biologic significance. The important epidemiologic principle is that a single agent may give rise to multiple defects when acting at a specific stage of prenatal differentiation.

The syndrome of mongolism is an example of a deviation from normal development initiated at about the eighth week of fetal life. The proof rests on embryologic evidence that mongoloid defects occur in organs and tissues undergoing active differentiation at that period. The site and nature of associated defects were found to be highly variable; and this was interpreted as evidence that mongolism, though a recognized clinical entity, was merely part of a larger biologic phenomenon. A significant association was demonstrated between mongolism and maternal disease—mechanical disorders of the uterus, threatened abortion manifested by hemorrhage and intercurrent infections. That such maternal factors were causally connected with disease in the child was indicated by evidence of activity of disease in the first trimester where pregnancy resulted in a mongoloid baby. A second principle thus emerged, that a specific type of arrest may be caused by different agents acting at a particular stage of development.

At present, the positions of the postrubella defects, mongolism and encephalo-ophthalmic dysplasia, and birth injuries are the only prenatal patterns which have been confirmed both by epidemiologic and embryologic data.

Ingalls has studied encephalo-ophthalmic dysplasia as a function of the late prenatal and early paranatal periods concluding that anoxia was the most important causative agent.

The position of birth injury is well established. The period of birth, however, includes varied stages of development depending on the degree of prematurity. Metabolic and mechanical factors were found to be of particular importance, especially those associated with placental bleeding and toxemia of pregnancy, prolonged or difficult delivery, anoxia, and anesthesia.

Finally, it is evident that the fetus may be subjected to multiple insults, either from the same general cause, as successive episodes of anoxia from hemorrhages of a placenta previa; or from chance action of two or more agents.

The period of prenatal development is of crucial significance in shaping an individual's ultimate physical status. Disease of the mother may result in fetal death, disability, or defect of the developing child, or in no manifest effect.

German measles remains the best example of an agent, with its effects demonstrably related to development during the first trimester of pregnancy. Mongolism is the best example of an arrest due to multiple agents acting about the eighth week of life. Other agents and other kinds of arrests have been recognized but await definitive evaluation.

Three principal epidemiologic implications become evident in respect to causes of developmental arrests. Unrelated agents acting during pregnancy may give rise to the same type of arrest. Different types of arrest may be caused by a single agent. The resulting anomaly is expectedly a function of the stage of development at which the agent is active.

News and Notes

The 1949 Annual Meeting of the American Association of Orthodontists, May 2, 3, 4, 5, and 6, 1949, Commodore Hotel, New York, N. Y.

The program for this meeting is taking definite shape and will soon be announced. In addition to the practical papers by outstanding orthodontists, this meeting will include a session devoted to scientific papers and many clinics demonstrating the newer methods in orthodontic practice.

The following rules governing visitors were passed by the Board of Directors of the American Association of Orthodontists.

To insure full participation of all members at the 1949 meeting, it is necessary to limit the attendance to members of the American Association of Orthodontists and the following:

1. Associate, junior, or probationary members of component societies of the American Association of Orthodontists.
2. Associates of members of the American Association of Orthodontists.
3. Students of recognized graduate and postgraduate orthodontic schools.
4. Recent graduate students of recognized orthodontic schools.
5. Teachers of recognized schools of dentistry.
6. Any dentists belonging to a recognized dental or orthodontic organization outside of the United States of America.

Since this meeting will begin on Monday, May 2, and close on Friday, May 6, it will afford out-of-town members and their families an opportunity to spend two week ends in New York City.

You are urged to make reservations now to assure obtaining desired accommodations.

J. A. Salzmann, Chairman, Press and Publication.

Prize Essay Contest, American Association of Orthodontists

Eligibility.—Any member of the American Association of Orthodontists; any person affiliated with a recognized institution in the field of dentistry as a teacher, researcher, undergraduate or graduate student shall be eligible to enter the competition.

Character of Essay.—Each essay submitted must represent an original investigation and contain some new significant material of value to the art or science of orthodontics.

Prize.—A cash prize of $500 is offered for the essay judged to be the winner. The committee, however, reserves the right to omit the award if in its judgment none of the entries is considered to be worthy. Honorable mention will be awarded to those authors taking second and third places. The first three papers will become the property of the American Association of Orthodontists and will be published. All other essays will be returned.

Specifications.—All essays must be typewritten on 8½ by 11 inch white paper, double spaced with 1 inch margins, and composed in good English. Three copies of each paper, complete with illustrations, bibliography, tables, charts, etc., must be submitted. The name and address of the author must not appear in the essay. For purposes of identification, the author's name together with a brief biographical sketch which sets forth his or her dental and/or orthodontic training, present activity, and status (practitioner, teacher, student, research worker, etc.) should be typed on a separate sheet of paper and enclosed in a sealed envelope. The envelope should carry the title of the essay.

Presentation.—The author of the winning essay will be invited to present it at the meeting of the American Association of Orthodontists to be held in New York City, New York, May 2-6, 1949.

Final Submission Date.—No essay will be considered for this competition unless received in triplicate by the Chairman of the Research Committee on or before March 15, 1949.

ALLAN G. BRODIE, Chairman Research Committee,
American Association of Orthodontists,
30 North Michigan Avenue, Chicago 2, Ill.

American Board of Orthodontics

The 1949 meeting of the American Board of Orthodontics will be held at the Commodore Hotel, New York, N. Y., April 28, 29, 30, and May 1. Orthodontists who may desire to be certified by the Board may obtain application blanks from the Secretary, Dr. Stephen C. Hopkins, 1726 Eye Street, N.W., Washington 6, D. C.

Northeastern Society of Orthodontists

The Fall Meeting of the Northeastern Society of Orthodontists will be held at the Hotel Commodore, New York, N. Y., on Nov. 22 and 23, 1948.

Central Section, American Association of Orthodontists

The Central Section of the American Association of Orthodontists held its annual meeting at the Hotel Cornhusker, Lincoln, Nebraska, Oct. 25 and 26, 1948.

The following program was given before the organization:

Method of Surgical Correction of Cleft Palate and Lip Deformity That Does Not Interfere With Normal Growth of the Face. Wayne B. Slaughter, D.D.S., M.D., Chicago, Illinois.

Orthodontic Education. Allan G. Brodie, Dean of the Dental School and Professor of Orthodontics, University of Illinois, Chicago, Illinois.

Some Views of the American Board of Orthodontics on Orthodontic Education. Bernard G. deVries, President, American Board of Orthodontics, Minneapolis, Minnesota.

Case Analysis and Treatment Planning. J. W. Adams, Indianapolis, Indiana.

Clinical Observations on the Axial Inclination of Teeth. B. F. Dewel, Evanston, Illinois.

Guiding Alveolar Growth. S. J. Kloehn, Appleton, Wisconsin.

The Correction of Malocclusion and Facial Disharmony With the Edgewise Mechanism. Robert Gaylord, Dallas, Texas.

Biomechanical Principles Involved in the Movement of Teeth and Their Application With the Labial Lingual Arch Mechanism. F. T. Barich, Evanston, Illinois.

The Use of the Twin-Wire Mechanism in the Treatment of Class II, Division 2 Cases. Joe E. Johnson, Louisville, Kentucky.

Rocky Mountain Society of Orthodontists

The annual fall meeting of the Rocky Mountain Society of Orthodontists was held at the Cosmopolitan Hotel, Denver, Colorado, Oct. 13 and 14, 1948.

Officers of the Rocky Mountain Society are:

President, Fred Bowden.
Secretary-Treasurer, Elmer S. Linderholm.

The program given was as follows:

Dr. Spencer Atkinson, Pasadena, Californin.

Dr. Arthur Smith, Los Angeles, Californin. A New Surgical Approach for the Correction of Inferior Maxillary Prognathism. (Illustrated by motion pictures in color.)

Dr. Brusse and Dr. Linderholm. Movies of Stainless Steel Technique.

Dr. Lyndon Carman. Clinical Photography.

Dr. Ernest Klein. Informal Discussion of Traumatic Occlusion.

Dr. Robert Downs. Fluorosis.

Central Section, Pacific Coast Society of Orthodontists

The meeting of the Central Section of the Pacific Coast Society of Orthodontists was held at the Alexander Hamilton Hotel in San Francisco on Sept. 14, 1948.

For the afternoon session, Chairman Ernest Johnson introduced Dr. George Nagamoto, Professor of Orthodontics at Kansas City Western Dental College. Dr. Nagamoto took for his topic of discussion "A Consideration of Stimulation Forces in Orthodontic Treatment." He discussed methods of measuring the amount of force exerted by different appliances and a consideration of the difference in results due to variation in amount of force used. After illustrating his talk with clinical material, Dr. Nagamoto concluded the afternoon by showing a color film on the application of the universal appliance.

The evening session was called to order at 8:05 P.M. by Chairman Ernest Johnson.

The Chairman appointed a nominating committee consisting of Art Skaife, Clu Carey, and Verne Smith. It was announced that the next meeting of the Pacific Coast Society of Orthodontists would be in San Francisco on Feb. 21-23, 1949. Program Chairman Ray Lussier introduced Walter Straub, who presented "Retention With a New Type of Retainer," which has qualities designed to improve conditions. The description was illustrated with slides, and the features were clearly shown. The important feature was a retention loop in the premolar area eliminating labial wires in deciduous cases.

The next meeting of the Central Section of the Pacific Coast Society of Orthodontists will be held Feb. 21, 22, and 23, 1949, at San Francisco.

Southern Section, Pacific Coast Society of Orthodontists

The quarterly meeting of the Southern Section of the Pacific Coast Society of Orthodontists was held on Friday, Sept. 10, 1948, at the Rodger Young Auditorium, 936 West Washington Boulevard, Los Angeles, California, with David L. England, Presiding Officer and Chairman of the meeting, calling the meeting to order at 2:00 P.M.

Verne Fluhrer was introduced by Chairman England as the chairman of the day.

The following program was arranged and presented by Verne Fluhrer:

Paper by George Nagamoto, Professor and Associate Director of Orthodontics, University of Kansas City, School of Dentistry, entitled "Force Versus Stimulation in Orthodontic Appliances."

Discussion of George Nagamoto's paper by Jesse Linn, and an open discussion by several members from the floor.

Table clinics augmenting George Nagamoto's paper, presided over by the following men: Sydney Cross, F. W. Fahrney, Ben Reese, Fred McIntosh, Harvey Spears, Berneice Barkelew, Robert Gawley, Robert Lee, Jack Loughridge, Calvin C. Garverick, Dallas McCauley.

Dallas McCauley referred to an idea on construction of Hawley retainer when tongue thrusting habit is present.

After a social hour and dinner, a movie was shown by George Nagamoto, showing technical aspects of the construction and assembling of "The Universal Appliance."

Following the presentation of the picture, table clinics were given, illustrating certain points in the procedure shown.

At the close of the program David England presided at a short business meeting.

The minutes of the previous meeting as published in the *Bulletin* were read, approved, and accepted.

There being no further business to transact the meeting adjourned at 9:30 P.M.

Present at this meeting were 36 members, and 10 guests.

HERBERT L. SHANNON, Secretary.

Pacific Coast Society of Orthodontists
(Organized 1913)

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Orthodontic Societies and Officers

The AMERICAN JOURNAL OF ORTHODONTICS, in accord with its established policy, will publish the names of orthodontic societies of the world and their principal officers in the January, 1949, issue of the JOURNAL. This information must be in the office of the Editor, Dr. H. C. Pollock, 8015 Maryland Avenue, St. Louis County 5, Missouri, by Dec. 1, 1948.

Fifth Annual Seminar for the Study and Practice of Dental Medicine

Fluorides in prevention of tooth decay, the influence of hormones on growth, and nuclear research in bone and tooth metabolism were among recent significant findings disclosed to the medical profession and the public at the Fifth Annual Seminar for the Study and Practice of Dental Medicine at the Desert Inn, Palm Springs, California, Oct. 17-22, 1948.

The Seminar brought together at Palm Springs some 250 leading medical and dental men from throughout the United States, Mexico, and Canada, to hear of recent developments in dental medicine and evaluate them. Presiding over the Seminar was Dr. Hermann Becks, Chairman of the Division of Dental Medicine, College of Dentistry, University of California, who is founder and president of the Seminar.

Philip E. Adams New President-Elect of American Dental Association

Dr. Philip E. Adams, orthodontist of Boston, new president-elect of the American Dental Association, has been active in dental association affairs for nearly three decades. In 1927 and 1928 he served as secretary of the Metropolitan (Boston) District Dental Society, he is now completing his twentieth year as secretary of the Massachusetts Dental Society, and for the past year served as first vice-president of the American Dental Association. He has been a delegate of the Massachusetts Dental Society at American Dental Association annual sessions since 1928.

PHILIP E. ADAMS

Dr. Adams was elected unanimously during the closing session of the eighty-ninth annual meeting of the Association's House of Delegates in Chicago on September 16. He became president-elect as Dr. Clyde E. Minges, of Rocky Mount, North Carolina, the 1947-1948 president-elect, was installed as American Dental Association president. He will take office as American Dental Association president at the close of the ninetieth annual session to be held in San Francisco, California, in October, 1949.

Dr. Adams was graduated from Tufts Dental School in 1918. After serving in the United States Navy during World War I, he began the general practice of dentistry. In 1919 he became an instructor in the department of orthodontics of Tufts Dental School. He has served on the Tufts College faculty since and is now full professor of orthodontics. His present practice is devoted to this specialty.

Dr. Adams was born in New Sharon, Maine, July 1, 1896, and attended public schools in Farmington, Maine.

In addition to being a member of the American Dental Association and the Massachusetts Dental Society, Dr. Adams is a member of the Maine Dental Society, the American Academy of Dental Science, Northeastern Dental Society, International College of Dentists, Northeastern Society of Orthodontists, Pan-American Odontological Association, American Association of Orthodontists, Omicron Kappa Upsilon, Federation Dentaire Internationale, and the New England Dental Society. Dr. Adams was president of the last named society in 1932. He also is a member of Rotary International, American Legion, and the United States Naval Reserve Officers Association.

Oren A. Oliver

Dr. Oren A. Oliver, who served as wartime president of the American Dental Association, has been awarded the Selective Service Medal and presented a Congressional citation signed by President Truman for his patriotic services.

The presentation was made in Chicago, where the ADA held its 89th annual convention.

"Certificate of Merit in the name of the Congress of the United States. There is issued herewith the Selective Service Medal to Oren A. Oliver in recognition of patriotic services performed without compensation in the administration of the Selective Training and Service Act of 1940 as administered.

"Dr. Oliver assisted the State Department of Selective Service for Tennessee in obtaining members of the dental profession to serve without compensation as Local Board Examining Dentists throughout the war period. As president-elect and president of the American Dental Association, he was of great assistance to the Director of Selective Service in all dental problems."

(Signed) Harry S. Truman
President of the United States

Attested:
Louis B. Hershey
Director of Selective Service

Notes of Interest

Eugene E. Atlas, D.D.S., announces the limiting of his practice exclusively to orthodontics, 197 Heberton Avenue, Port Richmond, Staten Island, New York, telephone, GIbraltar 2-2320.

Harry S. Galblum, D.D.S., announces the opening of his offices in Suite 419, Park Lane Building, 2025 Eye Street, N.W., Washington 6, D. C., telephone Republic 1400, practice limited to orthodontics.

Dr. Samuel J. Lewis, orthodontist of Detroit, Michigan, has announced that he will retire from active practice on Dec. 1, 1948, and that he will be succeeded by Dr. Robert E. Coleman at 308 David Whitney Building, Detroit, Michigan. Dr. Lewis will make his future home in Tucson, Arizona, and will take an active part in the annual seminar held in Tucson.

Dr. H. C. Pollock and Dr. E. V. Holestine announce the removal of their offices from 8022 Forsythe Boulevard to 8015 Maryland Avenue, St. Louis County 5, Missouri, practice limited to orthodontics.

Dr. Gustave H. Sheldon wishes to announce his association with Dr. Joseph A. Sheldon, practice limited to orthodontics, 550 Cookman Avenue, Asbury Park, New Jersey.

Dr. William J. Speers wishes to announce the association of Dr. Lennard T. Swanson in the exclusive practice of orthodontics at 60 Charlesgate West, Boston, Massachusetts.

Oliver Wilson White, D.D.S., D.D.Sc., M.S., announces the association of Robert E. Ross, D.D.S., M.S., in the exclusive practice of orthodontics, 213 David Whitney Building, Detroit, Michigan.

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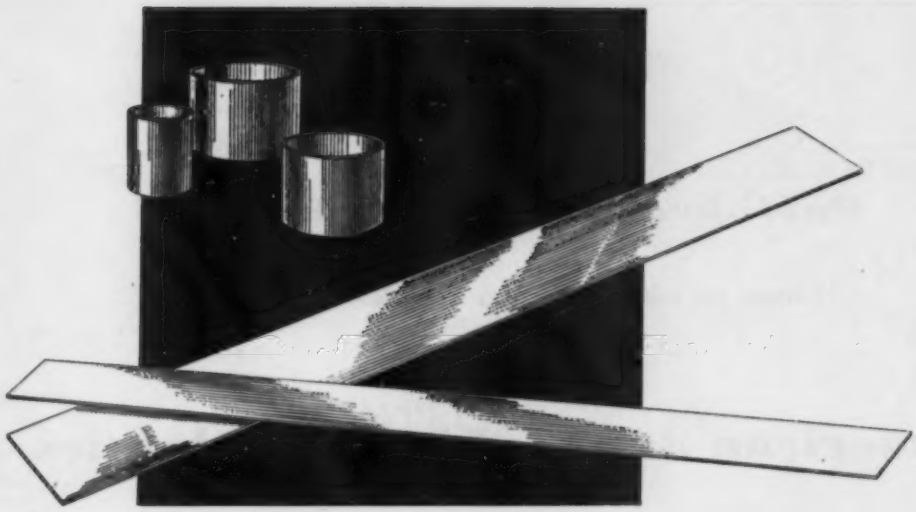

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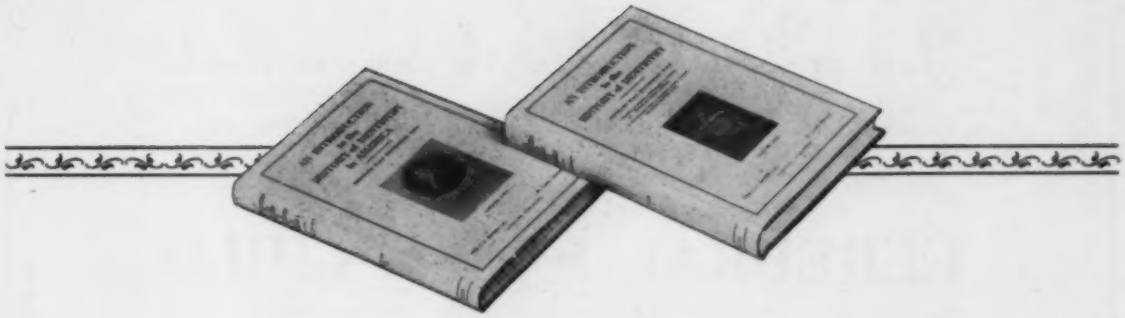

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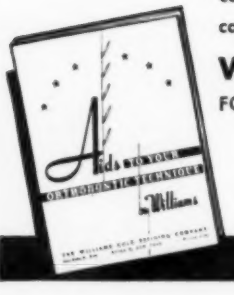

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